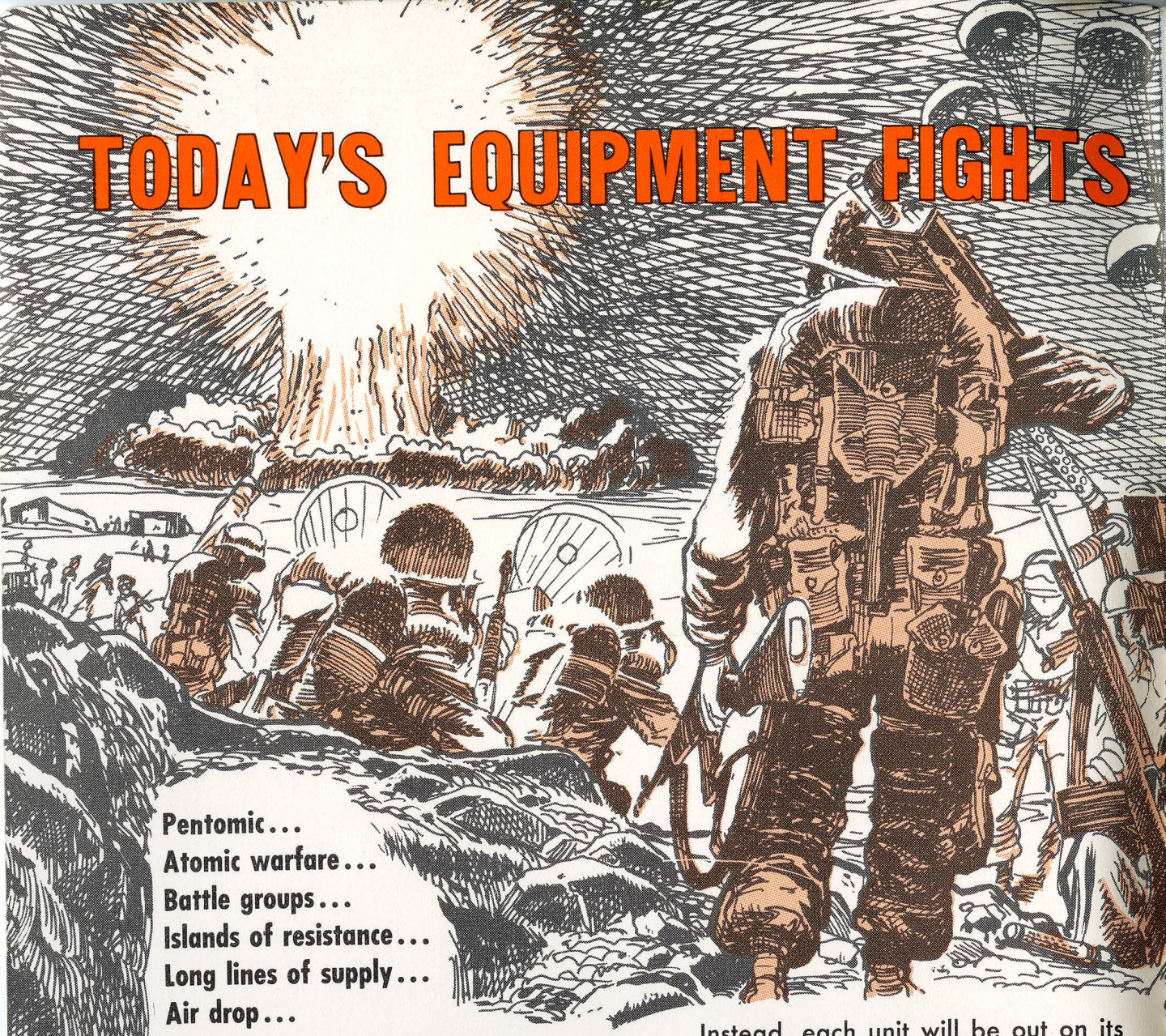
Issue 72
PS
1958 Series
THE PREVENTIVE MAINTENANCE MONTHLY
FORWARD OBSERVER
WILL EISNER
AMMUNITION FEATURE
SEE PAGE 2

TODAY'S EQUIPMENT FIGHTS



Pentomic...
Atomic warfare...
Battle groups...
Islands of resistance...
Long lines of supply...
Air drop...

These are some of the words being bandied about these days by men who are looking to what future war might be like.

The new organizations such as the Pentomic outfits all point to the way things will be—real spread out, with no friendly old umpteenth division on your right elbow and no hustling Colonel Blue's Battalion on your left.

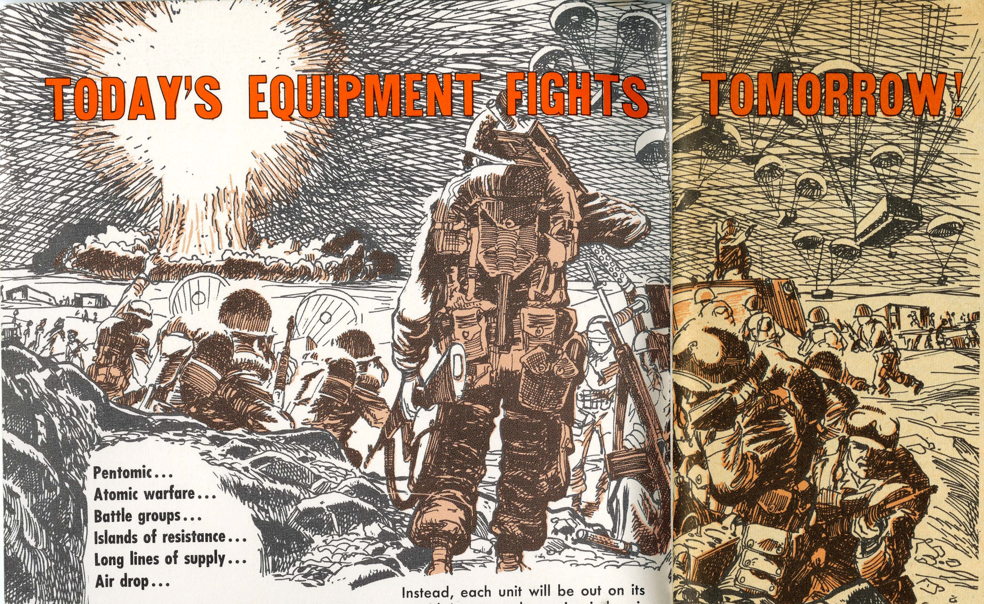
It looks like there'll be no solid fronts such as you had in World War II and the Korean episode . . . no big maintenance and supply outfits backing you up from right behind the hill.

Instead, each unit will be out on its own with its re-supply coming in by air most of the time.

Maintenance, for the most part, will be limited to what **you** can do right there in your own unit.

That's why Preventive Maintenance —the right kind of care and operation you as the operator, gunner, driver, or user of equipment do—is going to be so all-fired important. Because, chances are, you've got to keep that vehicle, weapon, radio—or whatever you've got —operating and fighting at its best till the operation's over . . . and you never know when that'll be.

TODAY'S EQUIPMENT FIGHTS TOMORROW!



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The equipment you've got today is what you fight with tomorrow.

The PM know-how you get today will take you through the fight tomorrow.

If you're the guy who says: "Oh, well, I'll check that Mule's oil tomorrow," or "My rifle will be OK till next week," you'll be the one who'll never get the chance to rear back and tell the boys how rough it was.

PS THE PREVENTIVE MAINTENANCE MONTHLY

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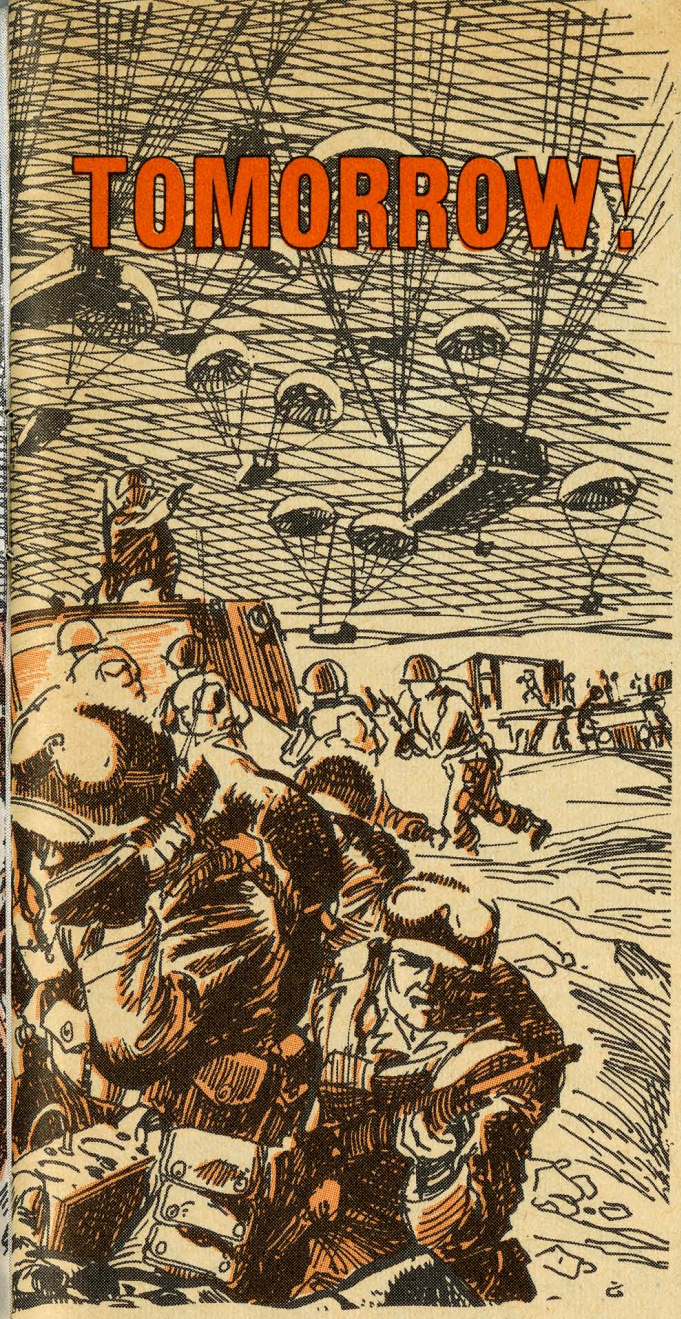

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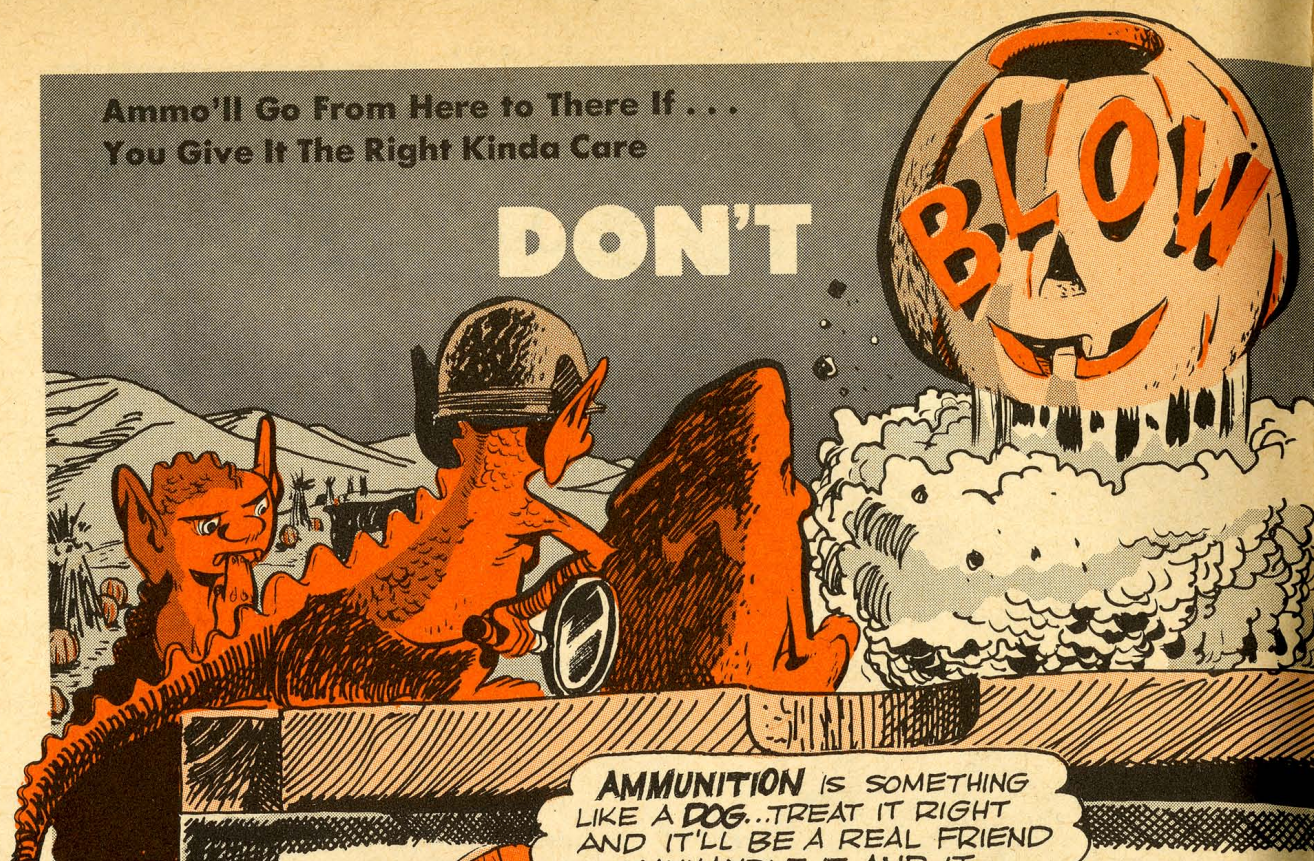
Ammo'll Go From Here to There If . . .
You Give It The Right Kinda Care

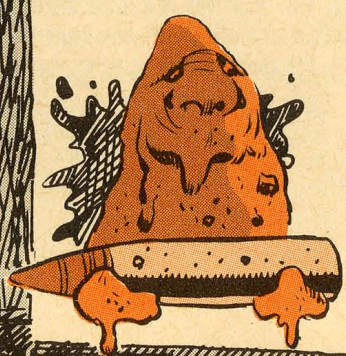
DON'T BLOW



Treating ammo right means keeping it in good shape, getting rid of the stuff that isn't and keeping the weapon it comes out of up to snuff. It adds up to having the ole helmet liner carrier working on all eight whenever you're around ammo.

Ammo means one thing to an infantryman . . . another thing to an artilleryman . . . and something else to a tanker. It's still ammo, tho. And most of the rules for small arms ammo are the same for the bigger stuff.

DIRT



Take dirt, grime and grease as a f'rinstance. That junk has no place on any kind of ammo. And it doesn't belong in the chamber, bore or firing mechanism of any weapon—whether it's a .22-cal pistol or a 280-mm gun.

Ammo'll Go From Here to There If . . .
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DON'T BLOW YOUR TOP

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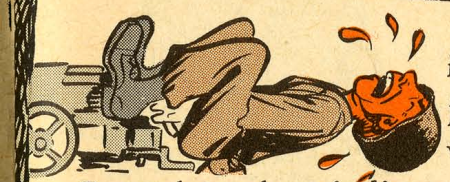
Ammo that's loaded with dirt and stuff'll get itself jammed in the chamber and you'll have a job getting it out. And the same thing'll happen with clean ammo and a dirty chamber.

But, when a bore is dirty with carbon or what have you, you're letting yourself in for a barrel full of headaches. If a projectile can't get out the muzzle end of a weapon because of dirt or a carbon buildup, it'll try to get out the sides of the barrel.

YOUR TOP



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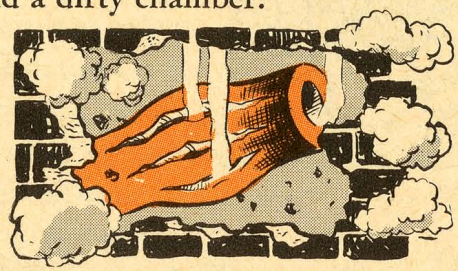
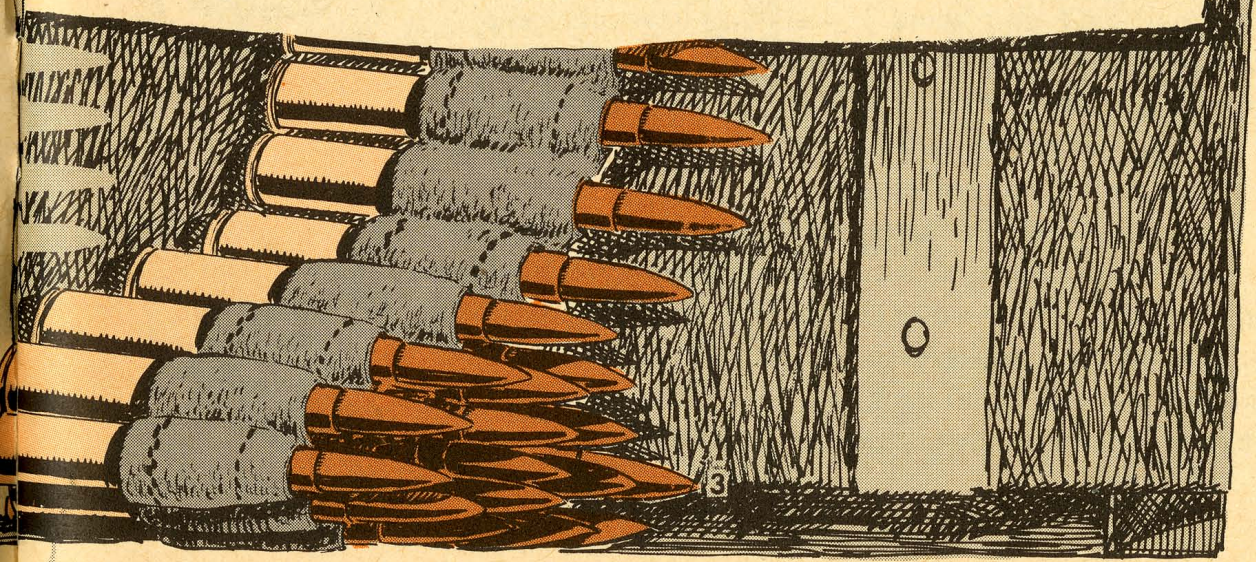




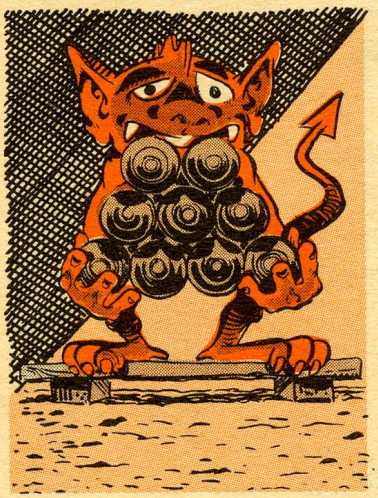
CORROSION

Some small arms cartridges and cartridge cases get to looking like they got mixed in with some hen fruit that was being fixed up for an egg hunt. They're coated with blue, green, yellow or white stuff—corrosion. White means real danger.

Corrosion means the metal is being eaten away. That weakens the brass and makes things ripe for a rupture when fired. Then you may find gas pressure going where you don't want it to go.

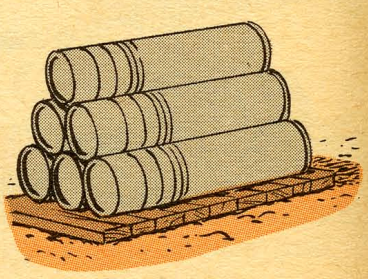
A case split at the neck, dented or burred or a projectile that's too far back in the case will cause a lotta gas pressure to go in the wrong direction. The bigger the weapon, the more wild pressure will be on the loose.

STORAGE

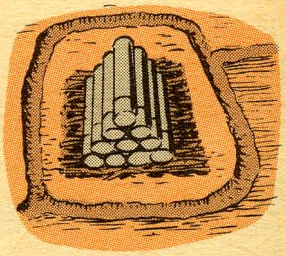


Proper storage plays a big part in halting ammo trouble.

One thing you wanna do is stack your shooting material in neat piles, whether it's in packing cases or containers. And make sure you stack by lot number.



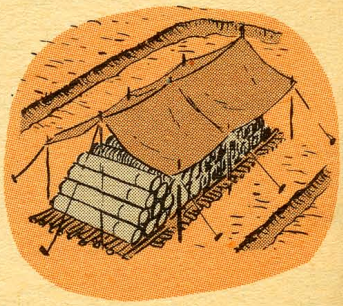
The stuff oughta be stacked on some sorta dunnage, like a pallet, to raise it approximately three inches from the ground. You can even use tree branches in a pinch.

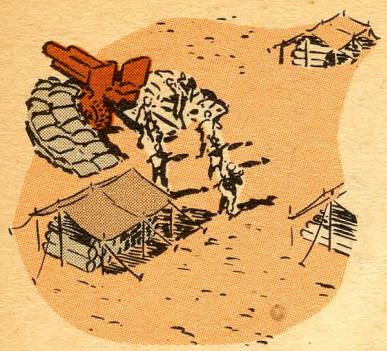


Even with the three inches, you oughta pick out a stacking area that's on high ground. If you don't have much choice, it's a good idea to dig drainage ditches so rain water'll detour around the piles.

In case you're in a hot, humid place, keep checking for fungi, termites and corrosion.

And, wherever you are, rig up a tarp that'll protect the ammo from anything that comes from outta the sky—rain, snow or sun. Keep the tarp at least six inches from the stack, to give the air a chance to move around. The same goes for sandbags or any other barricade you may put around the ammo—at least six inches away.

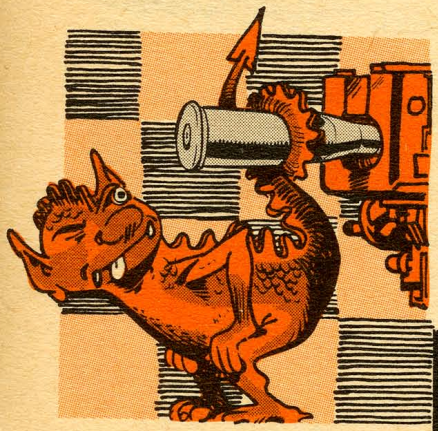




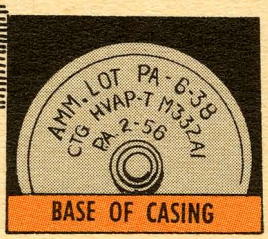
The stacks of ammo oughta be certain distances from each other—depending on the kind and amount of ammo. That way, if one lets go with a barrage, the others won't have much of a chance of joining in the fireworks. But don't scatter the stacks so's one of 'em falls under the sweep of your weapon. When in doubt on how's and where's of ammo stacking check with your Ordnance Ammunition Officer.

SMOKING

LOADING

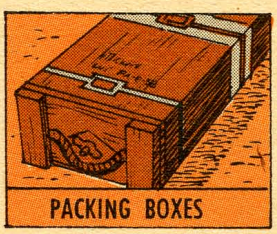


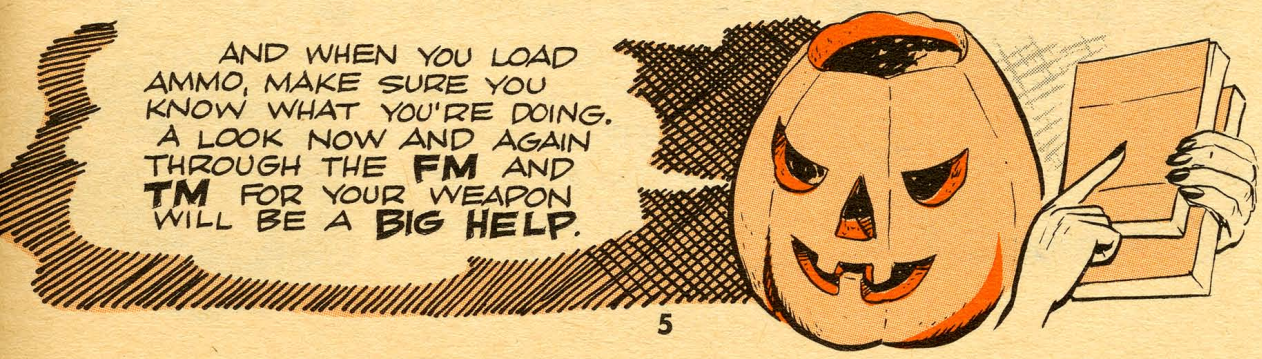
Once you get ready for loading a weapon there are some more things to remember. If you're firing artillery rounds, remove only the ammo and components you're gonna use from the containers. But, in case your figures don't work out, put the stuff back in the containers . . . and keep your lot numbers straight.



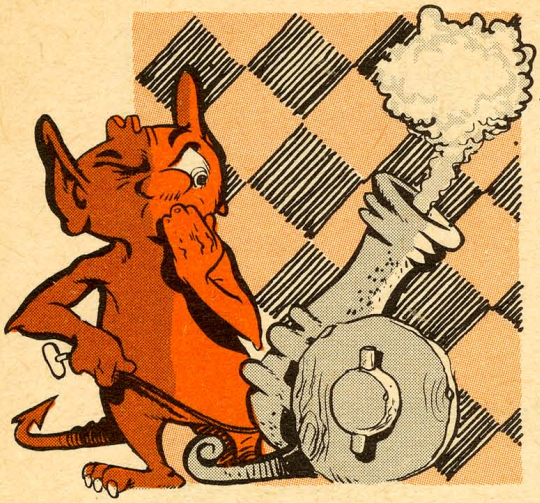
BASE OF CASING

CONTAINER


PACKING BOXES

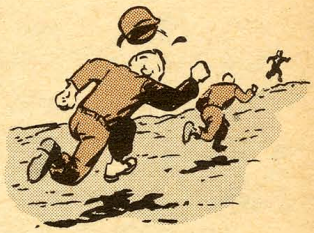


MISFIRE



After the man says, "Commence Firing," there are three words a guy handling a weapon and ammo never likes to hear—**misfire, hangfire** and **cookoff.**

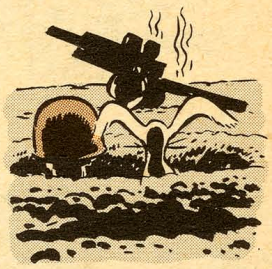
A misfire doesn't mean you should make for the hills, providing it is a misfire. You can get a misfire 'cause the firing mechanism or explosive train in the charge is bollexed up.



HANGFIRE

Trouble is . . . what you think is a misfire may actually be a hangfire. And that is something to think about. With a hangfire, there's a foulup in the explosive train after the hammer hits the primer. Maybe the holdup will be for a split second . . . maybe for a coupla minutes. You just don't know.

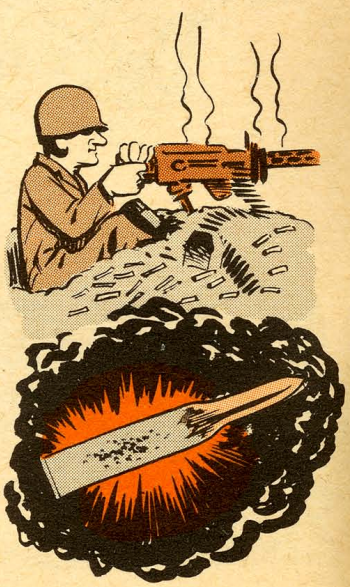
That means you oughta wait for a spell before opening the breech on artillery weapons . . . the bolt on small arms. And keep the shootin' iron on target and the muzzle and breech ends clear of animals—human and the other kind. It's 'specially important to have lots of empty space at the rear of a recoilless rifle or rocket launcher.



Your best bet is to check your FM and TM to see how long you wait to open the breech or bolt when you run into a hangfire. The waiting time is different for different weapons.

COOKOFF

Course . . . you don't wanna waste time when the weapon is hot as . . . well . . . hot. When a round stays in the chamber of a hot weapon for awhile, you're setting up things for a cookoff. And you know that in a cookoff any or all of the explosive parts in a round begin to act up. More'n likely the primer or charge will cook off.



If the primer or charge cooks off, the projectile will take off from the weapon without any help from you. But a cookoff in the bursting charge explosive train could mean adios weapon.

When you're of a mind that you've got the start of a cookoff on your hands, you wanna handle things the same as with a hangfire. In case you can't fire the round or remove it, you and the rest of the crew might just as well take a break and wait for the weapon to cool down.

FUZES

It wouldn't do to gab about ammo without saying somethin' about fuzes.

There are different types of fuze action (super-quick, delay and non-delay) but all of 'em hafta be handled the same way — with care. They're sensitive to touch—like touching the ground all of a sudden. That's 'cause their innards are made up of high explosive chemicals.

Like with ammo . . . you wanna keep fuzes outta the way of the sun or anything else that makes heat. High temperatures can throw off the timing in the fuze.

Separately issued fuzes—the kind that are screwed into separate-loading projectiles, for example—are best left in their airtight containers until just before you're ready to use 'em.

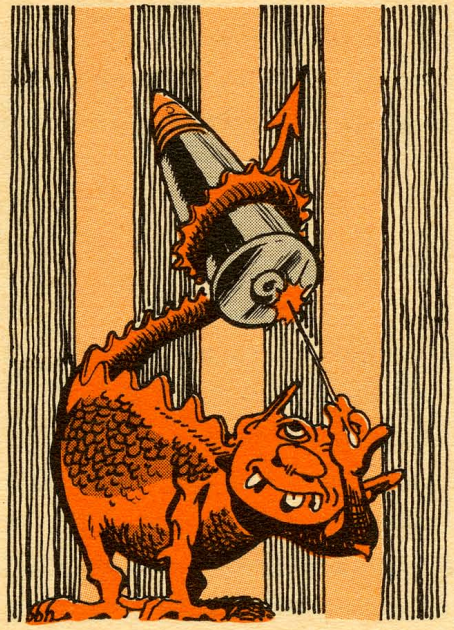
When you're fuzing separate-loading projectiles, make sure you use the right fuze wrench. Then set the fuze with the fuze setter that's meant for the job. Another thing to keep in mind is that some fuze-projectile assemblies need staking to keep 'em from coming apart when you set the fuze.

Remember to set the fuze in the direction of increasing readings. And, if you want to reset or return the fuze to safe, keep turning in the direction of increasing readings.

Once the ammo has been fuzed . . . the time to pull the safety wire from the fuze is just before shooting away. In case something comes up and you don't fire the fuzed ammo, replace the safety wire pronto.

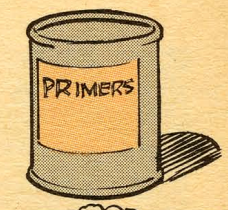
Another thing . . . don't try to find out what makes a fuze "tick" by taking it apart unless—unless you're ready for your set of wings. Only authorized ammo people can do that and then only with an OK from the Chief of Ordnance.

PRIMERS



You also wanna handle primers with care 'cause they are made of sensitive explosive and a charge of black powder.

Black powder has a way of gobbling up moisture so you've gotta be on the lookout for corrosion on the primers. You stop corrosion before it starts by keeping primers in their moisture-proof containers. That goes for deals where the primer is part of the cartridge case—like with fixed, semifixed and separated ammo—or by itself—like with the separate-loading stuff.



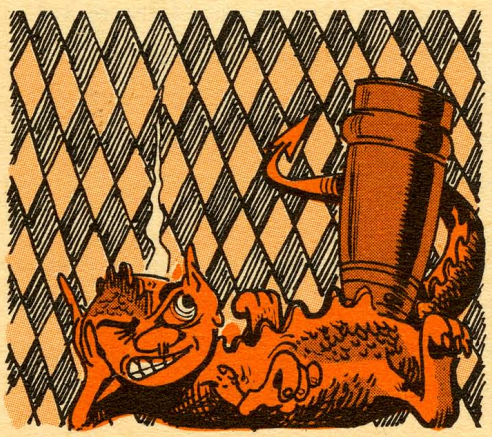
Of the four types of primers—electric, percussion, combination electric-percussion and ignition — the ones involving electricity need special attention. When you're working around electric primers, remember:

Don't have a live round in the chamber of your weapon when your electric leads are out in the open.

Be careful when you're wearing clothing made outta wool, fur or anything else that might generate static electricity into action.

Another good thing to remember when you're handling ammo that has the primer in the base . . . pass the round with the primer up and fuze down—outta the way of things that might get in the way.

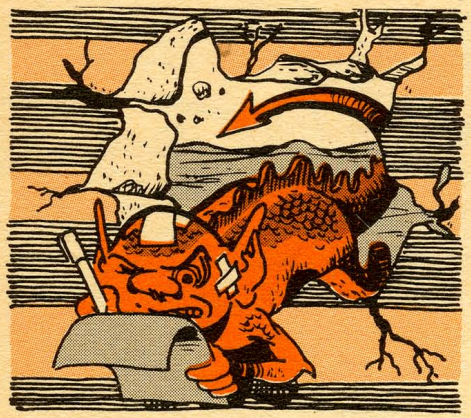
DUDS



There's gonna be a time when you fire an artillery round, mortar shell or maybe toss a hand grenade...and you won't hear the "whumph" of the ammo hitting home. Could be any number of reasons for the ammo not letting go, but they all add up to one thing—you fired a dud.

Don't mess around with a dud. More'n one has come to life just when a guy was handling it. What you do—and do soon as quick—is tell your CO about any dud you've come across. He'll get in touch with the local Ordnance Officer . . . he's the guy who'll take care of the dud.

REPORTS



In case a round goes off as it leaves the muzzle, you've got a premature burst . . . or you may get a short round.

That's when it comes in handy to know what it says in AR 700-1300-8 (12 Feb 58). The AR gives you the scoop on how to report malfunctions involving ammo and explosives, including missile stuff.

You won't fill out any forms, but you'll be supplying answers that will go into the report on the malfunction. And, the more poop you give the man who comes around to see you, the better the chance you won't have any more troubles later on.

So . . . when something goes wrong, get together with your crew and go over this list so's you'll have all the answers it's possible for you to give.

WEAPON

- ☐ Caliber, type and model.
- ☐ The industrial outfit or arsenal that made it.
- ☐ Serial number.
- ☐ Whether the fire was slow, rapid and the like.
- ☐ Elevation, fuze setting and zone in which weapon was fired.
- ☐ Recoil length.
- ☐ Range to target.
- ☐ Condition of weapon before the malfunction.
- ☐ The way the weapon looked after the malfunction.
- ☐ Number of rounds fired on the day of the malfunction.
- ☐ With weapons over 37-mm, except launchers for rockets or guided missiles, the overall number of rounds fired before the malfunction. Also total number of rounds fired after last pullover gage reading. If the tube is kaput or Ordnance can't get a gage to make a pullover gage reading of the tube, they'll want to look at the Weapon Record Book.

DESCRIPTION OF MALFUNCTION

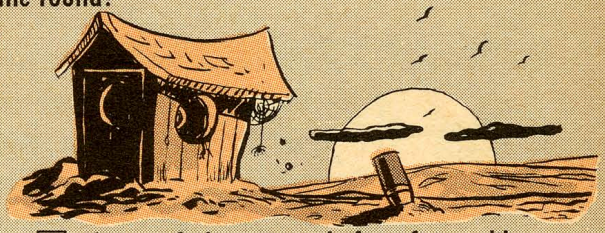
WEAPON

- ☐ Whether the weapon was working up to snuff just before the malfunction.
- ☐ How the weapon acted when the malfunction came.
- ☐ What was going on in the area just before the malfunction and what the crew did right after it.

AMMUNITION

- ☐ With a premature burst, was it high or low order and how far from the muzzle or the end of the launcher? Also was there anything in line of fire, anything in the tube or on the rails of the launcher, was the setting of the dual purpose or time fuze checked, was there any unburned powder, salts and the like in the tube?
- ☐ Were the TM's being followed to the letter and was there any sidetracking—like using more propellant than called for by the weapon and the round?

FIXED AND SEMIFIXED AMMUNITION
Including Mortar Rounds and Rockets



- ☐ Caliber, type and model. Give the entire Federal Stock Number and Defense Department Identification Code.
- ☐ What industrial plant, arsenal or depot made the ammo?
- ☐ Complete ammunition lot number.
- ☐ Type and model of fuze. Include lot number.
- ☐ Headstamping on cartridge that went sour.
- ☐ Shape of the ammo before firing—like whether it had been in its original container and the length of time it had been out of the container. Also a record of previous rounds.
- ☐ Total number of rounds of the same kind of ammo that's on hand.

SEPARATE LOADING AMMUNITION

PROJECTILE

- ☐ Caliber, type and model.
- ☐ Where it was loaded—what plant, arsenal or depot?
- ☐ Ammo lot number.
- ☐ Kind of filler.
- ☐ Lot number and type of booster or burster.

PROPELLING CHARGE

- ☐ Caliber, type and model.
- ☐ Who made it?
- ☐ Powder lot number.
- ☐ Weight of charge, plus info on the number of increments used with the malfunctioned round.
- ☐ What kind of shape the bag and wrappings were in.
- ☐ Pressure and velocity of rounds that went bad—if the info can be had.

FUZE

- ☐ Type and model.
- ☐ Plant or arsenal that made it.
- ☐ Lot number.
- ☐ Condition of the fuze packing just before the fuze was taken from its container and the length of time before it was used.
- ☐ A statement that the fuze had been screwed home by hand and then seated right with a fuze wrench before loading.
- ☐ The setting of the time fuze. Or if it was a dual purpose fuze, whether it was set for instantaneous or delay action.

PRIMER

- ☐ Type and model.
- ☐ Name of the manufacturer.

GRENADES
Black Powder Saluting Charges and the Like

- ☐ Type and model.
- ☐ Manufacturer.

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GRENADES
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- ☐ Type and model.
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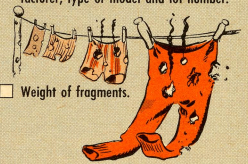
- ☐ Lot number.
- ☐ Amount of the same lot on hand.
- ☐ All possible scoop about the condition the stuff was in before the malfunction—like being in its original container, length of time it was exposed to the weather and a record of previous items of the same lot.
- ☐ If a fuze is used, the name of the manufacturer, type or model and lot number.

RANGE OF FRAGMENTS

- ☐ The path the fragments probably took.
- ☐ Distance of fragments from where malfunction occurred.



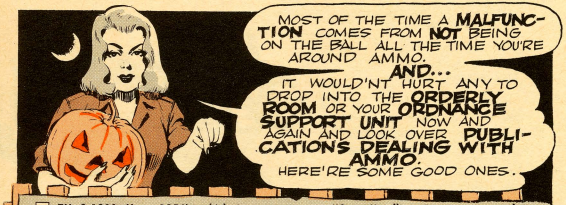
- ☐ Weight of fragments.

WEATHER
Lay of the Land and Other Things

- ☐ Weather, including high and low temperatures.
- ☐ Date and time of day of malfunction.
- ☐ Terrain at the gun position (woods, rocks, etc.)
- ☐ Things around the weapon like overhanging trees, camouflage and the like which may have been in the line of fire.
- ☐ Spot where projectile fell compared with where it was supposed to go.
- ☐ Whether the muzzle was close enough to the ground for pebbles or dirt to be blown into the bore by the blast from the previous round.
- ☐ Impact area (gravel, trees or what have you).
- ☐ Description of artificial barriers — like sandbags—the training course layout and so on, if they were involved.

When you run into a malfunction or accident, your unit commander or range officer will suspend the ammo with the backing of the local Ordnance Officer.

AMMO PUBLICATIONS



- ☐ TM 9-1900 (June 1956), which is on ammo in general.
- ☐ TM 9-1901 (Sep 1950), plus changes 1, 2, 3 and 4. Your Ordnance support has this one and it's on "Artillery Ammunition."
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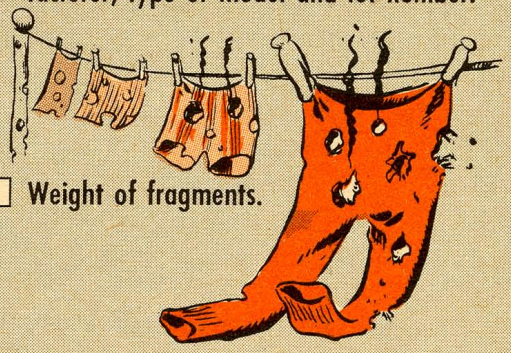

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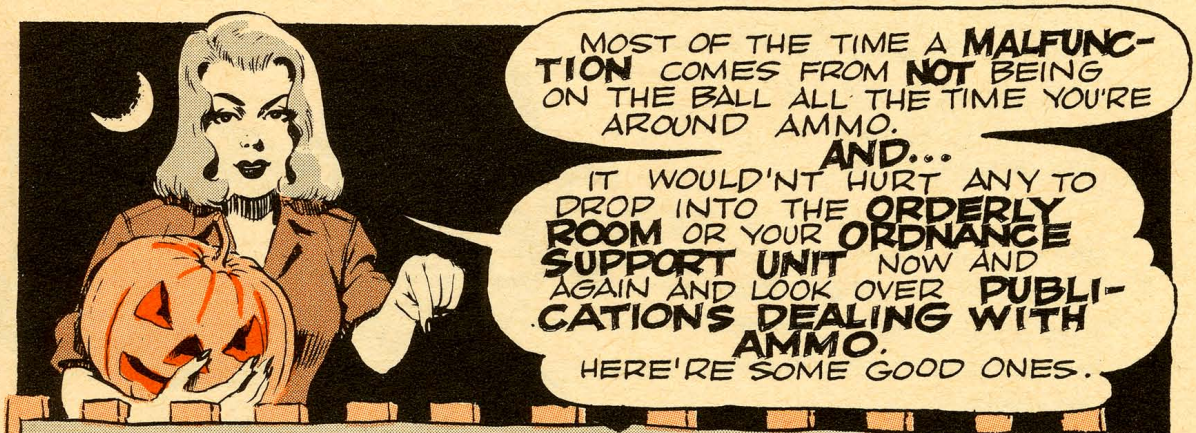

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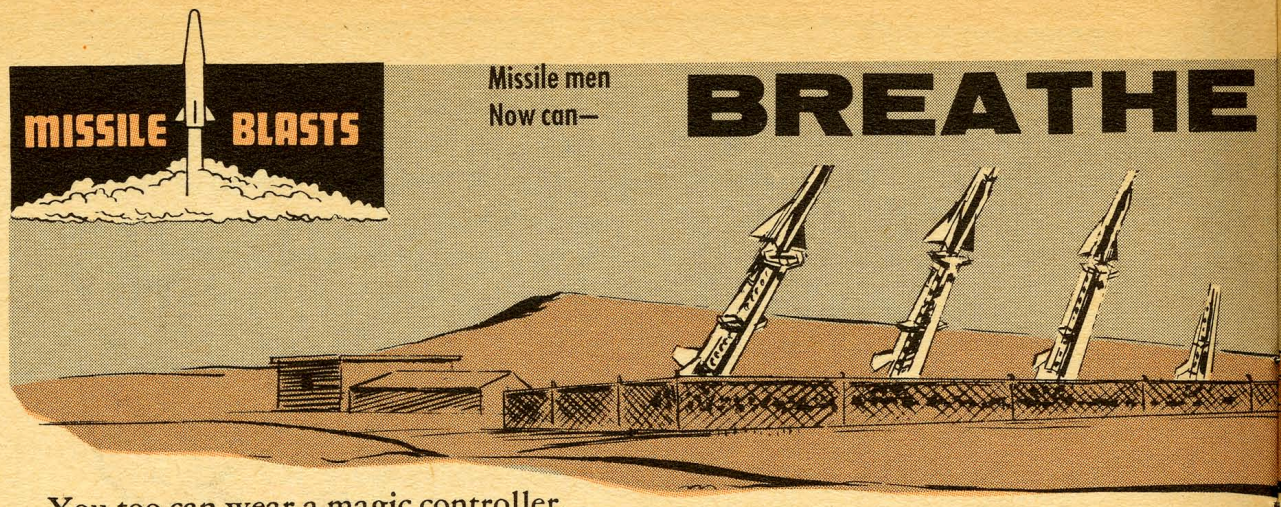


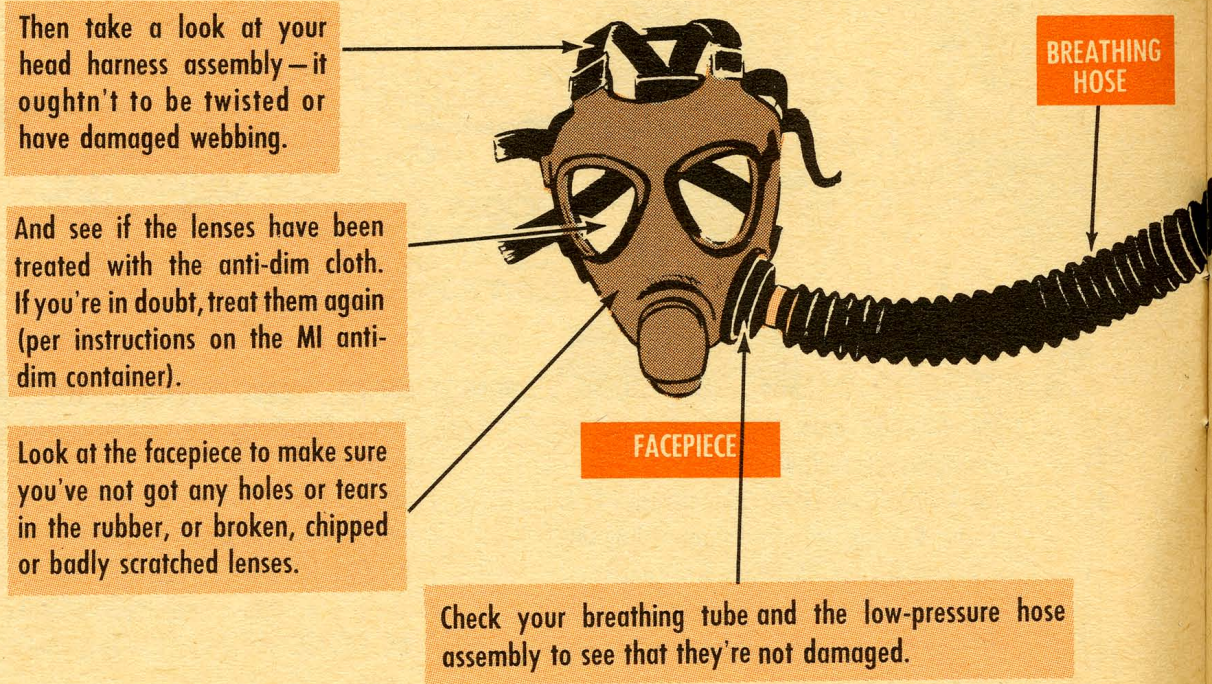
You too can wear a magic controller.

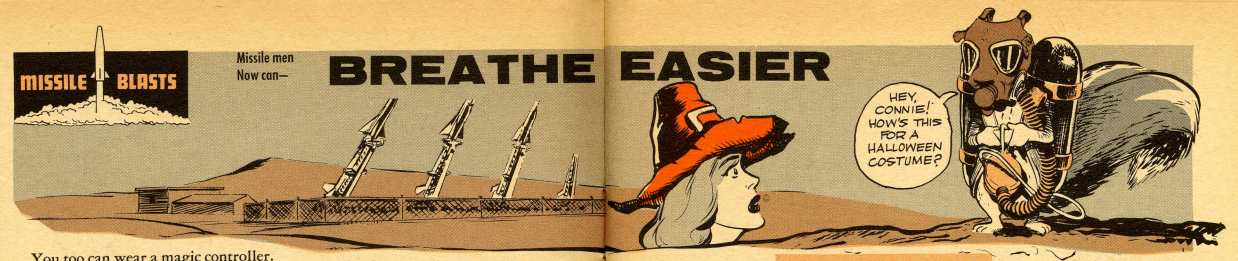
You'll breathe easier once you try this new number. It has many advantages over the old type. The adjustable harness can be shortened or lengthened so it'll fit more comfortably. When it fits right, it won't shift, ride or slide, and you'll be less likely to break a strap.

You may not see this in a slick magazine ad, but this is what the smart guided missile man will want to keep handy to wear around his missile. It's the new M15 compressed air breathing apparatus (FSN 4240-049-5435) that's taking the place of the M13 oxygen breathing apparatus.

BEFORE YOU USE IT

Here's what you do when you get your breathing apparatus to make sure it's OK to use:





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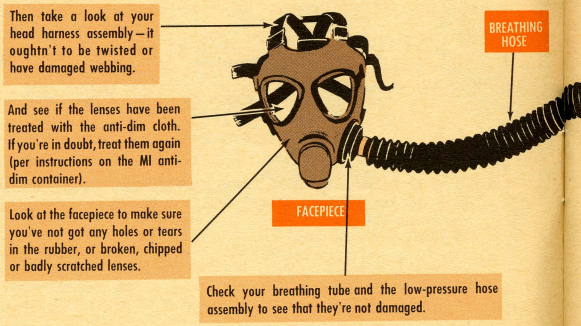
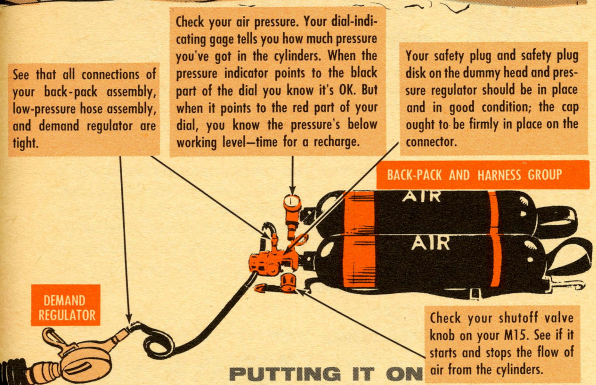
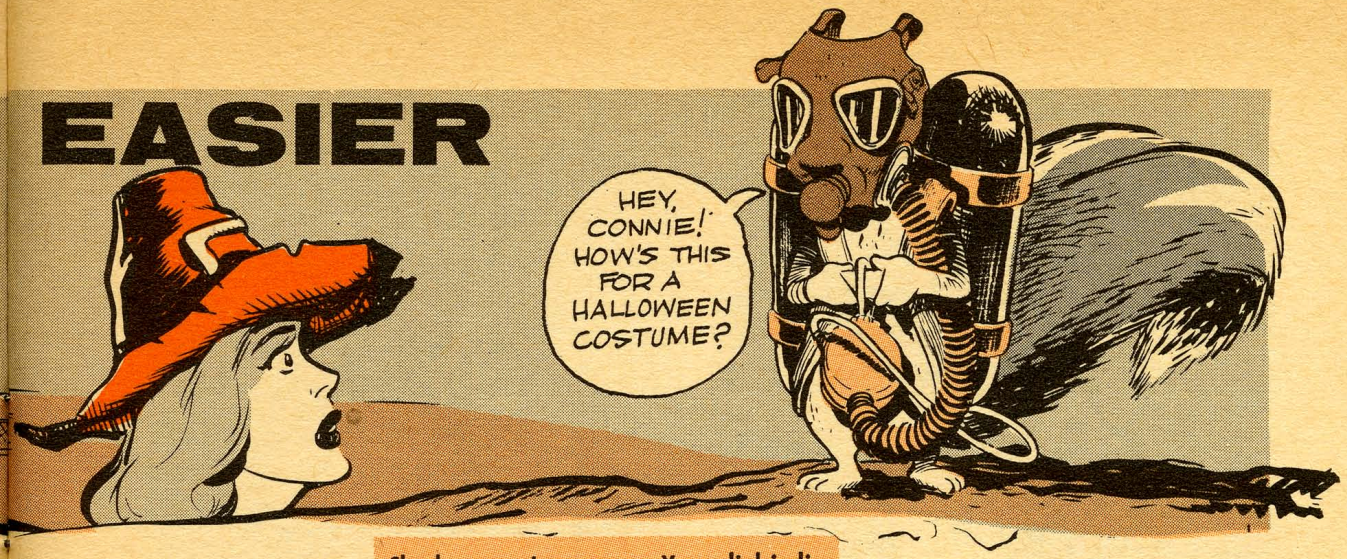


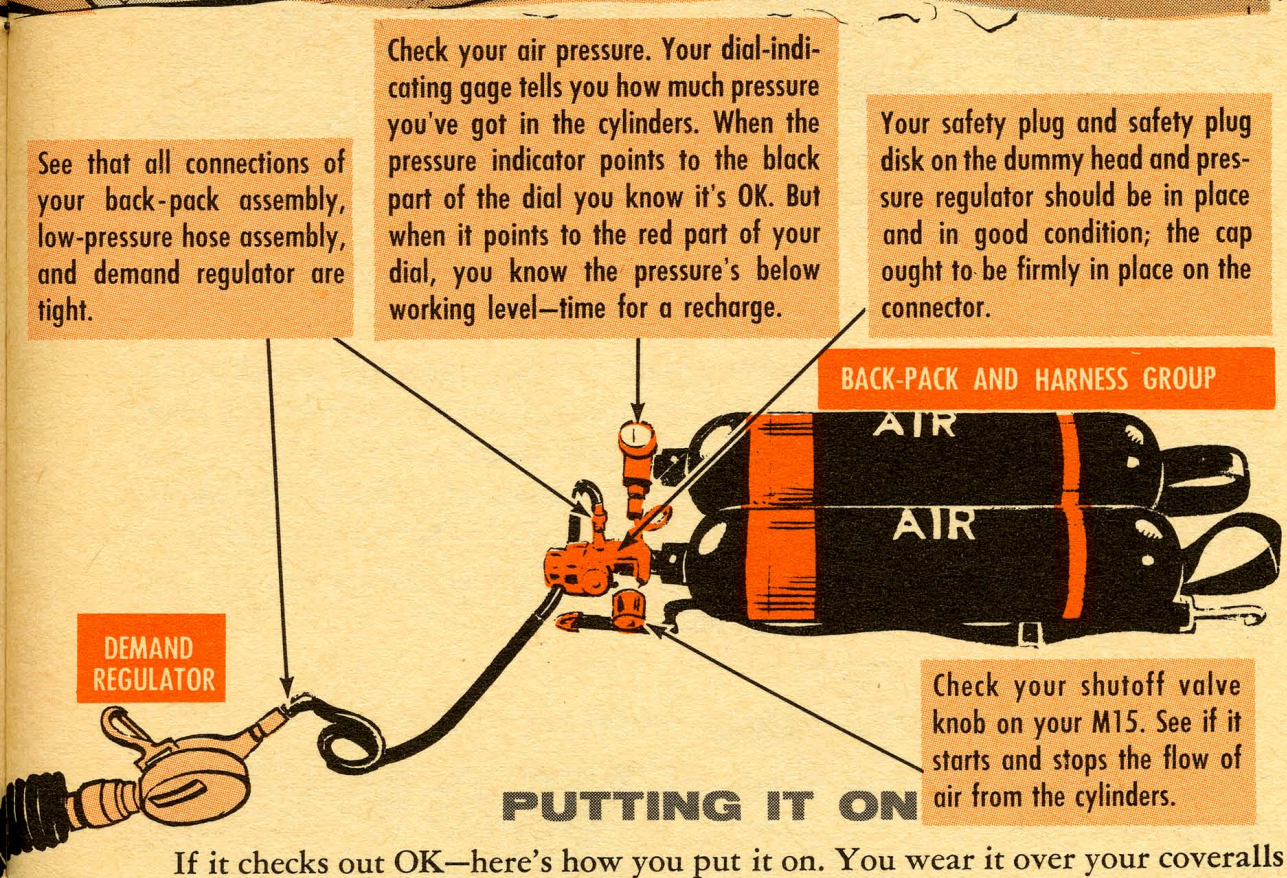


PUTTING IT ON

If it checks out OK—here's how you put it on. You wear it over your coveralls but under your tie-down hood. Just put your arms through the shoulder straps of the harness assembly and raise the cylinders on your back. Fasten the snap hook on the right shoulder-strap assembly to the D-ring on your left shoulder-strap assembly. Then let out or take up the straps so the tops of the cylinders are level with your shoulders and are held snug to your back. Keeping it high on your back'll make it easier to carry.

You fasten your belt assembly by hooking the snap hook to the D-ring and adjust it to fit snug. Then fasten your snap hook on the demand regulator and the snap assembly to the D-ring on your left shoulder-strap assembly. Put your facepiece on and adjust the head harness straps so the mask'll fit snug on your face.





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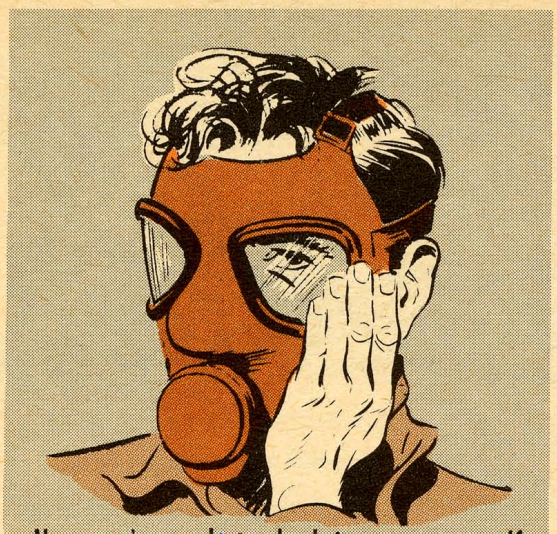
BEFORE OPERATION CHECK



Now you're ready to check it out on yourself. Before you connect the breathing tube assembly to the demand regulator assembly, make a test of your facepiece.

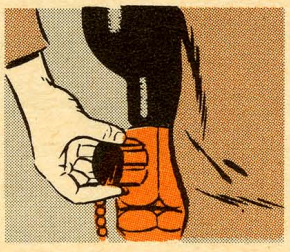
Kink the breathing tube or close the opening in the coupling with your hand so the air won't go into the breathing tube assembly. Breathe in slowly and hold your breath. The facepiece should collapse against your face.

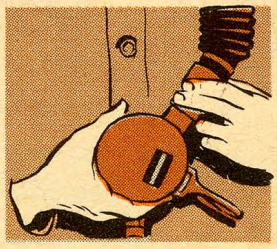
If it doesn't, then air's leaking either around your facepiece or through a hole in your facepiece or breathing tube. Try readjusting your head harness for a better fit and check again for leaks. If this doesn't help, better turn the whole deal in for another one because there may be a leak in the mask itself or the tube assembly.

With your breathing tube assembly blocked shut, breathe out—let the air go through your outlet valve in the facepiece. If the air doesn't escape through that outlet valve, better get another apparatus.

OPERATING YOUR M15

Now you're ready to start the breathing apparatus. Pick an area that doesn't have toxic fumes—then, with your right hand, open your ON-OFF valve by turning the valve knob counterclockwise as far as it'll go.





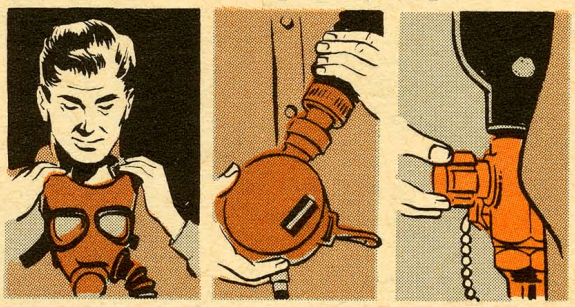
Screw the coupling assembly of your breathing tube to the adapter on the demand regulator and tighten it hand-tight (no wrench or other tool).

Your breathing apparatus is now in operation. Each time you breathe in, the demand valve automatically opens bringing in to your facepiece enough air for one breath. And at the end of each breath your demand valve closes and the air stops flowing into your facepiece. When you breathe out the air goes out through your outlet valve.

TAKE IT OFF

Here's what you do to stop your breathing apparatus. Make sure you're away from toxic fumes.

Then—take off your hood (if you used one) and the facepiece group, and unscrew the breathing tube coupling from the demand regulator.



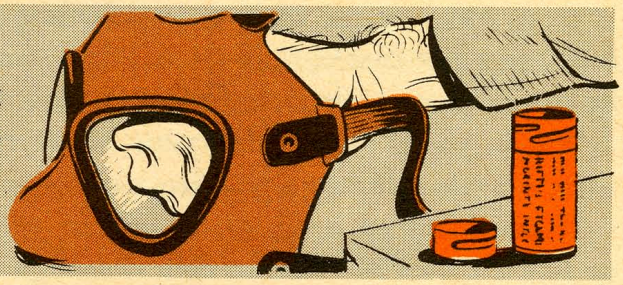
Use your right hand to turn the shut-off valve knob clockwise as far as it'll go (but don't try to force it). This closes the ON-OFF valve and shuts off the air supply from the cylinders.

To take your apparatus off—unhook your demand regulator and snap assembly from the D-ring on the left shoulder-strap assembly. Undo the snap hook on the belt assembly from the D-ring. Unhook the snap hook on your right shoulder-strap assembly from the D-ring on the left shoulder-strap assembly.

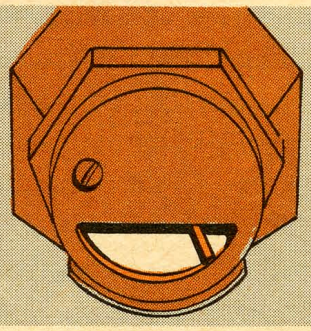
Hold the apparatus to keep it from falling, and take off your harness assembly.

AFTER USE

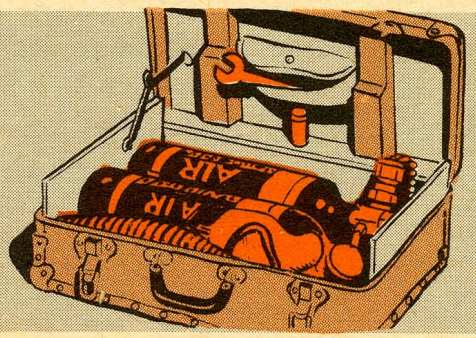
Now . . . again treat the eyepieces of the mask with the anti-dim cloth. This'll get your lenses in shape for the next time they're used.

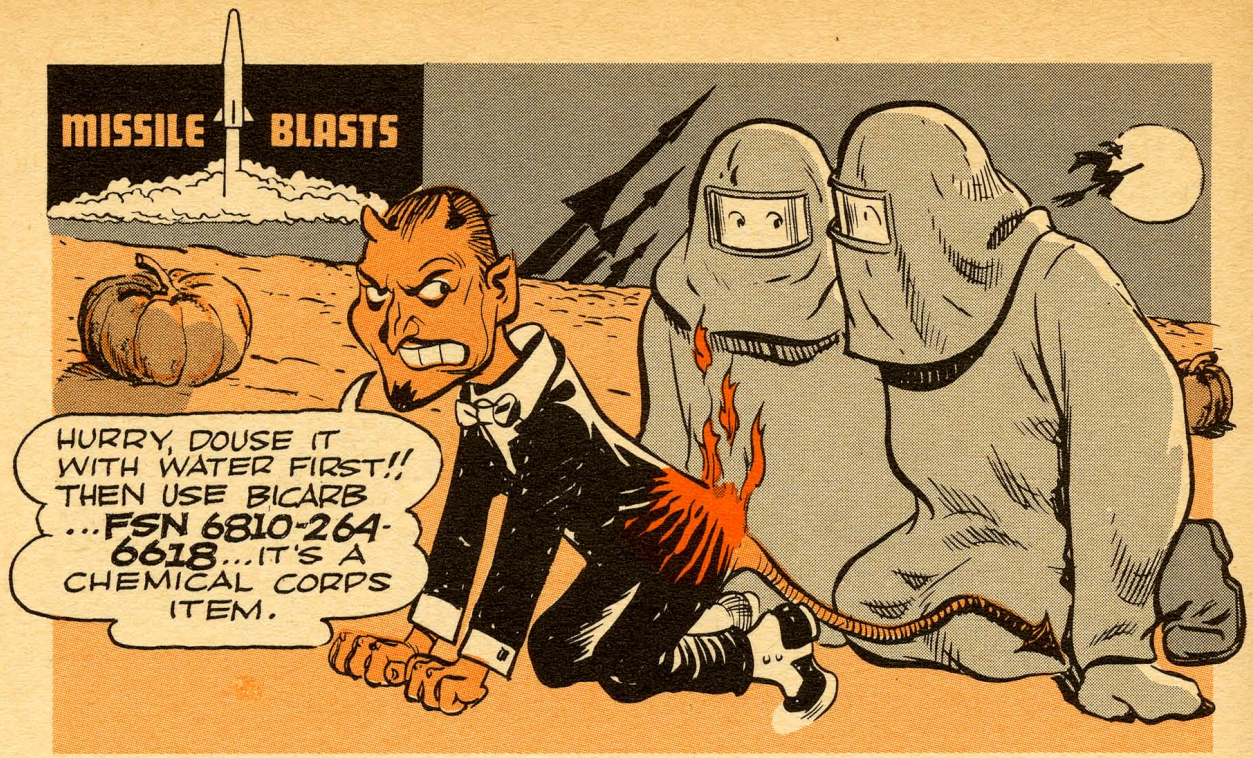


Before packing your equipment away, check the air pressure in the cylinders. If the pressure gage indicator is in the red, then you'll know the equipment is ready to go to your second-echelon maintenance people for a cylinder recharge.



And last, pack your equipment in its case. Put it in so's the mask, tube or harness won't be pinched or crushed. If you need a recharge, take the whole kaboodle to the recharge people. If not, keep the case in a dry place.





BURNED? TREAT IT FAST

Yep, when you're fueling or defueling your Nike-Ajax missile, you want to take extra care that none of the oxidizer (called inhibited red fuming nitric acid by its fancy name) gets on your skin. Could cause a nasty burn.

Natch, you'll always don your Man-from-Mars togs to do the job, but even then, it's possible that a few drops of the stuff could splash you.

If that happens, head for the nearest water faucet and quick! You don't want to give the oxidizer time to do a thorough painful burnin' job. Rinse it off with plenty of clear water, and then put some sodium bicarbonate on the exposed area of your skin. This'll help relieve the situation.

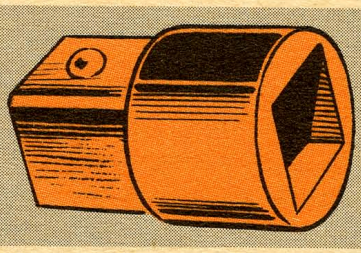
You want to be careful, though, that you don't put the bicarb on your skin **before** you rinse it off with water. This'll set you up for a worse burn than if you did nothing. That comes from the chemical mixture you get when water, bicarb and nitric acid meet head on.

So, lay off the bicarb until you've doused yourself with water first. Then you'll be safer . . . and happier. And always keep a supply of sodium bicarbonate on hand—just in case. You can get a pound of the stuff with FSN 6810-264-6618. It's a Chemical Corps item.

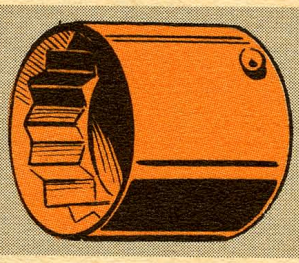
TOOLS YOU NEED, KEED

Sure you're having troubles . . . you need two more tools if you're gonna loosen or tighten the flight and shipping caps on your M31-series Honest John rocket. The tools you want are used with the Jato flight cap and shipping cap wrenches.

FSN 5120-240-8701 gets you an ADAPTER, SOCKET WRENCH: 3/4-in male sq plug, 1/2-in female sq socket . . .



and FSN 5120-189-7931 is good for a WRENCH, SOCKET: 3/4-in sq drive, 12 pt, 17/16 opng.



You can't draw the tools from your supply manual since they're not listed there so you've got to shoot the scoop to supply on your DA Form 1546. What you do is write "Not in Supply Manual. See Remarks" in Block 6 . . . and then in Block 36 (Remarks) tell supply you have to have the tools to maintain your rocket.

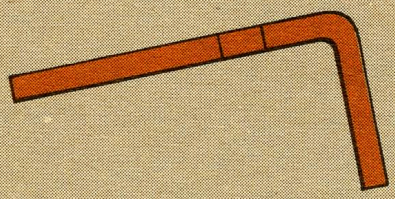
On Your Nike-Ajax Missile . . .

IS YOUR PISTON STICKIN'?

All it takes is a couple of shoves to keep the overboard dump port valve in your missile's propellant air regulator valve in top shape.

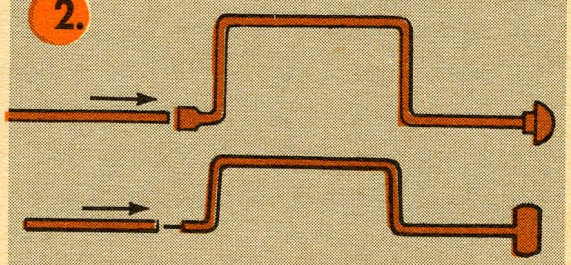
That valve, located in the aft section of the missile under the fin, needs exercising regularly to keep corrosion from building up on the outlet valve piston.

1.

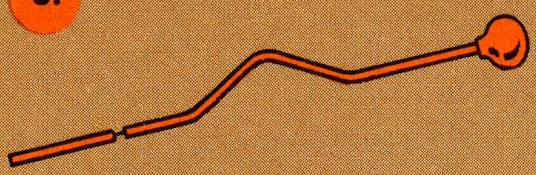


When the missile's on the hand bracket truck, there's no sweat in working on the valve 'cause the overboard dump port is easy to get at with the L-shaped exercising tool. It's another story when the missile's on the rail. The tool won't do nohow 'cause the rail gets in the way.

2.

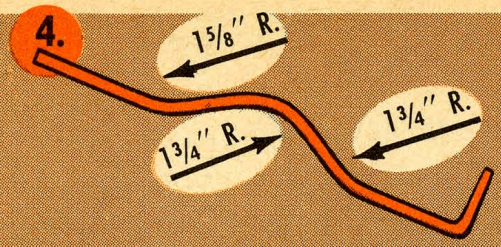


There're a coupla tools that'll do the job, tho. Some outfits have been supplied with one of these tools. They look a little different, but they do the same job. Trouble is . . . they bust real easy.

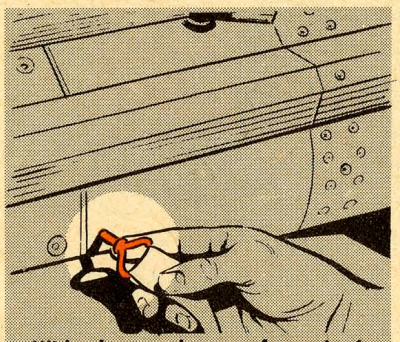


3.

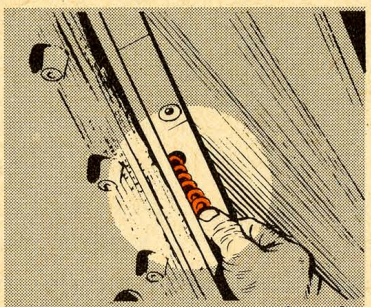
Other outfits may have this tool for exercising when the missile's on the rail. But what do you do when you want to exercise the valve along with your weekly checks—and you're plumb out of tools? Maybe yours is busted.



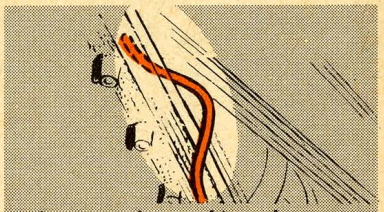
Instead of waiting for supply to send you one, the answer is to make one yourself, or have your support unit do it. Here's a real simple one. The tool is made out of $^{5}/_{16}$-in drill rod stock, about 18 inches long before it gets the bends.



With the regulator safety pin in place...



and the spring cap removed, stick the tool in the overboard port opening.



Before you do anything else, spot the point on the tool that's flush with the missile skin. Remove the tool . . . and then scribe or paint the point on the tool. The mark's important, as you'll see.

Once the tool is marked and is back in the port, give it a steady shove upward until you feel the piston move about $^{1}/_{16}$ to $^{1}/_{8}$ inch. Careful . . . don't try to move the valve with the tool. Once the piston moves, ease up on the tool.

Give the tool four or five pushes until you're sure there's no sticking inside the valve. You want to be sure the valve is left in the open position after you're through. And you do this by seeing if the mark on the tool is flush with the missile skin. If it's not, or if the piston is stuck, buzz your support unit.

But, when everything works out OK, all you have to do is replace the spring cap and go on to the next missile.

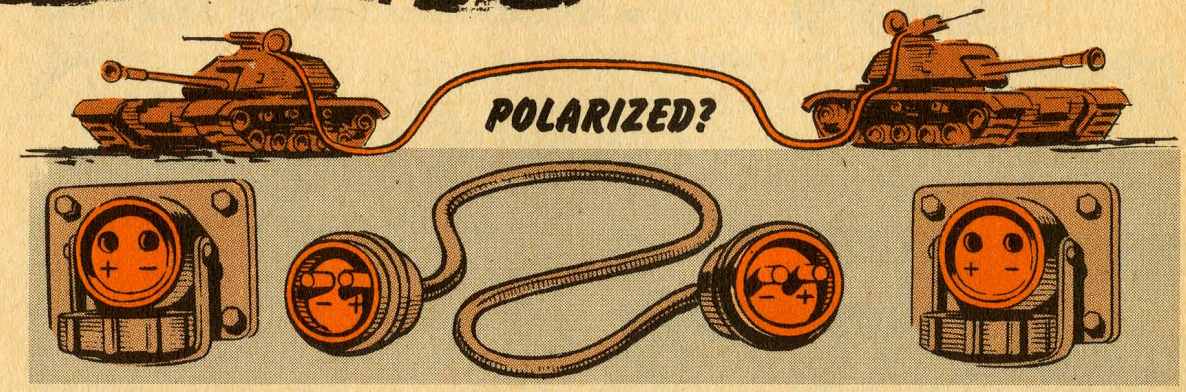
There's no reason to sweat if you have the tools shown in 2 and 3. The one shown above in 3 is a two-piece job held together by a piece of cable so's the parts don't go their separate ways. What you do is stick the short end in the overboard port . . . slide the rest of the tool into the short end . . . and start exercising.

The tools in 2 have two separate pieces . . . and with each the short piece goes into the overboard port. The rest of the tool is used to push the short piece into the port for exercising.

If you use any of these tools, don't forget to make that mark on the short piece so's you can tell if the valve is left open. The L-shaped tool is already marked.

Hot rumor has it that there's still a little confusion about the ins and outs of the auxiliary power outlet (slave receptacle, in shop talk) on the tanks, and the use of it.

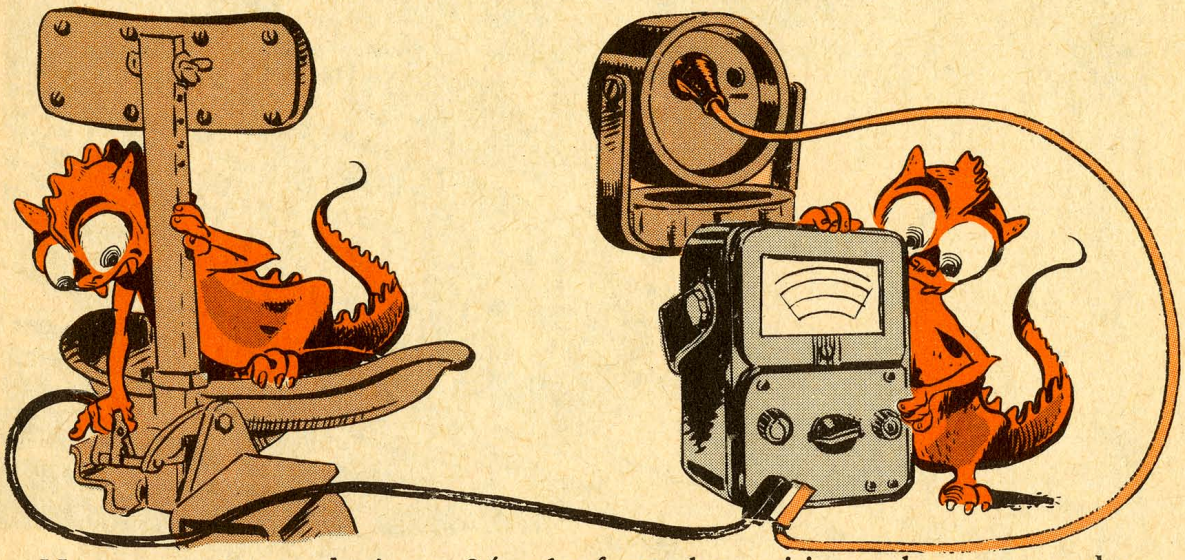
So, leave us commence at the commencement.



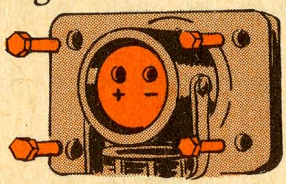
To start with, your slave receptacle is an outlet, just like a wall plug-in. But since it works on direct current it's shaped and keyed so the plug'll only go in one way. This keeps the positive and negative leads connected to the proper sides of the tank electrical system—polarized, they call it.

At least, that's the theory. But it's happened that now and then a tank got out with the receptacle connected wrong. This makes things real difficult when the time comes to use the system.

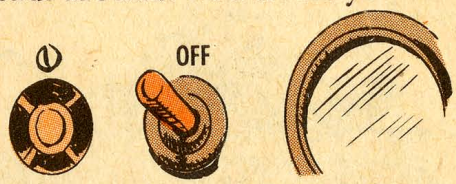
So, right soon now, **before** you need it, you'd be smart to check the receptacle in your tank and be sure the positive socket really does deliver positive current. You can use any voltmeter that'll handle 24 volts or more. Just check from the positive socket over to a good ground on the tank—master relay switch on, engine and Li'l Joe not running. Or, use a 24-volt test light.

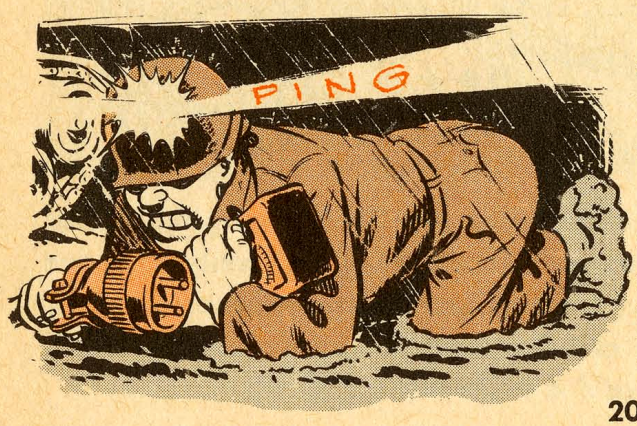


Now, suppose you don't get 24 volts from the positive socket to ground, or your test light doesn't light up. Confirm your test by trying from the negative socket to ground.



If you get a show of current there, you know you've got to take out the four attaching cap screws, pull out the receptacle, and switch the leads around. You'll find you can pull the sockets out of the rubber grommet without too much trouble. But, for gossakes, be sure your master relay switch is off—you don't want a short circuit.



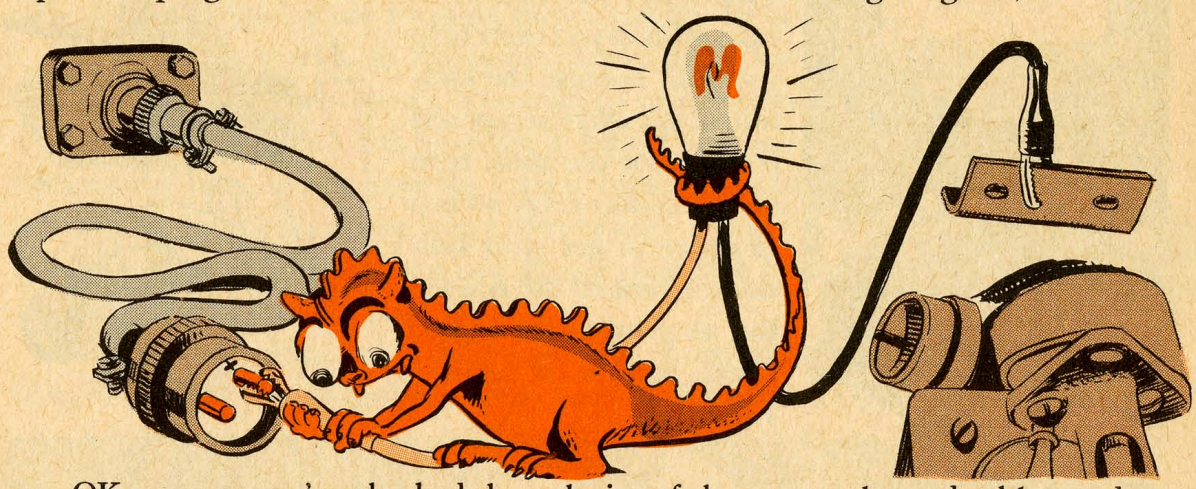


Change the sockets from side to side and shove 'em back, being sure the hot lead gets into the positive hole. Then put the receptacle back in place.

Checking this some nice sunny day in the tank park may save you from having to do it some dark night when nature's blowing up a snowstorm, or some other unkind forces are making rude gestures.

When you're sure the receptacles in your tanks are correctly hooked up, it'll pay you to test the cables you may be going to use. Hook 'em into a tank you know is OK, and then check to make sure the positive lead on the other end of the cable actually is the hot lead.

To do this, you turn your master relay on and look for voltage between the positive plug and the hull of the tank (voltmeter or test light again.)



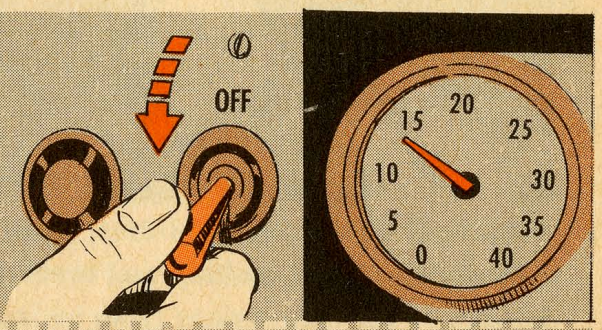
OK, so now you've checked the polarity of the receptacles and cables, and you know you can use 'em any time you need 'em. There're two ways you can use your slave cable setup. The most common is to start a tank engine or auxiliary when the tank's batteries are dead.

STARTING A TANK

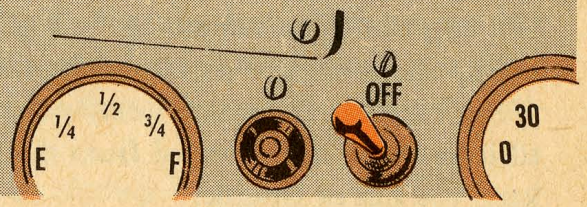
To use a running tank to start one with dead batteries, you drive close enough for the cable to reach from your slave receptacle to the one on the dead tank.

Stop your engine and turn off your master relay switch. Be sure the master relay switch in the dead tank is also off. This'll prevent any arcing when you plug in the slave cable.

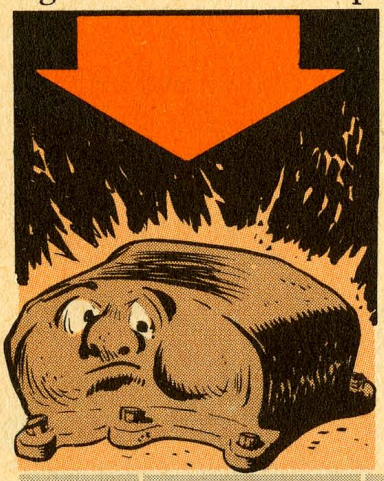
After hooking in the cable, turn on the master relay switch in the live (slaving) tank, and start your engine, setting it for about 1400-RPM. (1400-RPM is a good fast idle or a bit more, if you have no tach in your tank.)



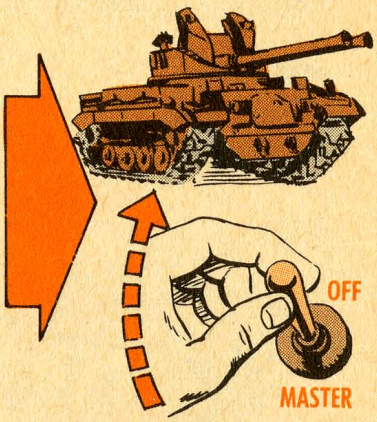
YOU CAN NOW START THE DEAD (SLAVE) TANK, BUT, REMEMBER, LEAVE ITS MASTER RELAY SWITCH **OFF**... OFF... OFF... OFF!

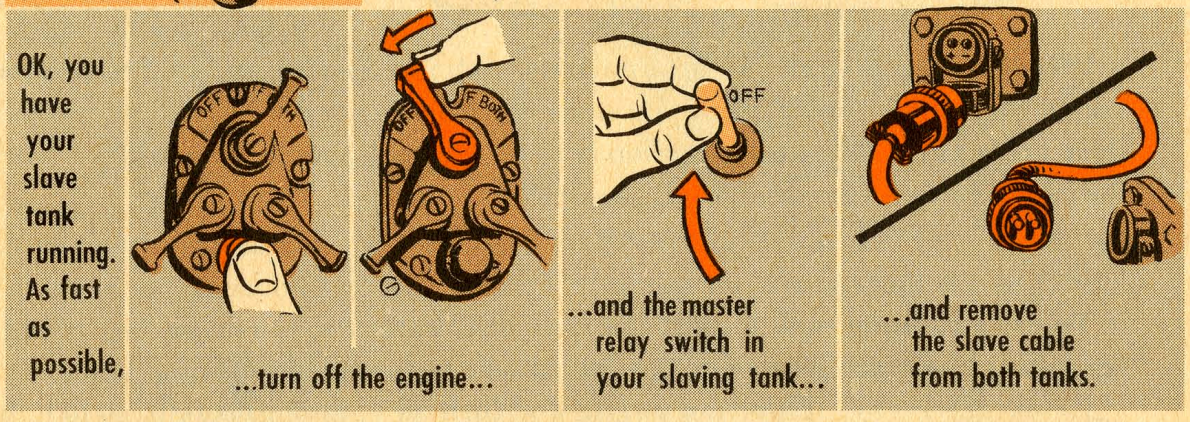


Right here's where people blow up their regulator boxes. The combination of a dead battery, an outside source of current and the starting load, not to mention the generator output when your dead tank engine starts up, can confuse the generator control box beyond hope, and the main line switch can get to chattering and fuse its contact points. So you've gotta leave that master relay switch off.



(Except—on the M42 twin 40-mm you can't help yourself, because the location of the slave receptacle is such that you must turn on the master relay switch in order to get your outside current to the starter. But **as soon** as the engine starts, turn it off again—**FAST!)**



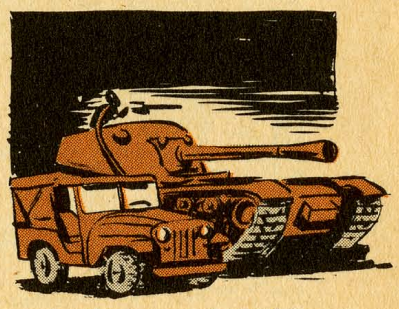


You see what's involved. You don't want any current flowing through your cables when you're making and breaking your connections, because of possible damage to the connections from arcing. Plus the chance of burning your tank if you've got any gas fumes in the hull. Then you want to avoid any danger of lousing up the generator regulator circuits.

So you leave the master relay switch off while starting your dead tank and until it has been disconnected from the live tank. Watching these two points will keep you out of trouble.

BATTERY CHARGING

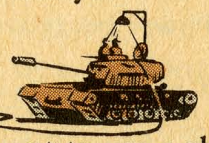
Some time you may want to use a slave cable to charge the batteries in a dead tank, rather than to start its engine. In this case, after you have connected the cable with both master relay switches off, you'd start your live tank and then turn the master relay switch in the dead tank **on**. The thing to remember is that you only do this if you're not running the engine of the dead tank.



This is a handy trick to remember if you don't have another tracked vehicle handy. You oughtn't try to crank a big tank engine with a cable from a Jeep, f'rinstance, because the Jeep doesn't have the battery capacity for the job. But, by hooking in your Jeep and running it at a good fast idle for an hour or so, you can charge your tank batteries enough to make a start.

Naturally, this is strictly a field expedient. Jeeps cost too much to use 'em for a battery charger if it's possible to pull your tank's batteries out and take 'em to a regular charger. Of course, you'll use Li'l Joe to charge 'em when you can.

POWER SUPPLY



And there's one more condition under which you might want to use a slave cable from one tank to another, or from a shop truck to a tank. That's to supply current to run the electrical accessories in a tank which has no battery in it. Like for the Signal types to work on the radio, or the turret mechanics to do their work.

Bein's there's no battery in the tank, there's no point in turning on the master relay switch, except, once again, in the case of the M42, which has its slave receptacle on the **battery** side of the master relay.

STORED TANKS

And, in the case of the National Guard or Reserve units, sometimes it's easier to use the slave cable either from a truck or from a set of batteries mounted on a truck, to start and run your stored tanks for the monthly run-up.

This beats installing the tank's own batteries (which are in the battery-room, o'course). This slave starting is OK, too, since the outside batteries will start the tank, and will then serve as a ballast for your tank generating system while you run up the engine.

Watch it, tho, if you keep the truck engine running for additional current when starting the tank. Shut it off when the tank catches. Once more you don't want two generating systems trying to charge the same batteries without a paralleling circuit. It won't work.

Keep TB Ord 537 (20 Sept 56) in mind on slaving.

BRIDGE ERECTION BOATS . . .

COLD WEATHER

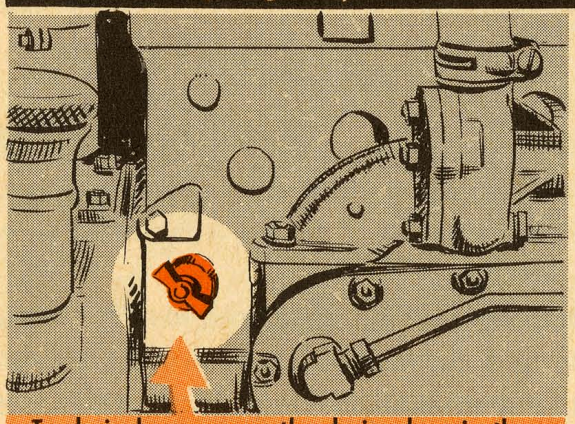
It's easy to do the wrong thing—or forget to do the right thing—when it comes to cold weather maintenance on your 19- and 27-ft bridge erection boats.

Power boats are tougher to take care of because maintenance gets a little tricky. So you've got to be up to snuff in knowing what to do, and then give things the old double-check to make sure they're done.

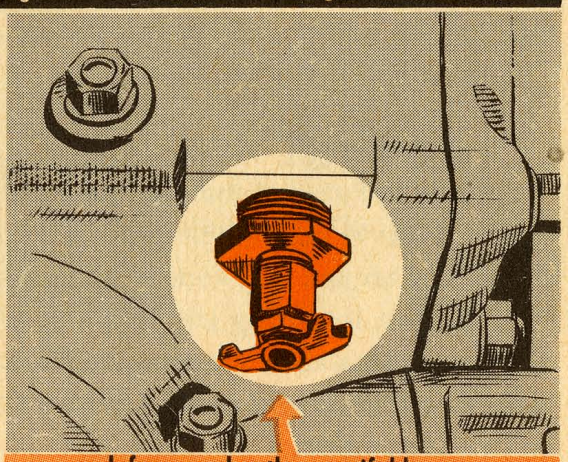
The biggest thing to remember is: Don't run a boat when it's out of the water unless the propeller shaft is disconnected. It only takes a few revolutions of a dry prop shaft in a rubber cutless bearing to cause damage.

DRAINING

First thing in getting ready for winter is draining the coolant and refilling with antifreeze.



To drain her, remove the drain plugs in the engine block, the pumps . . .

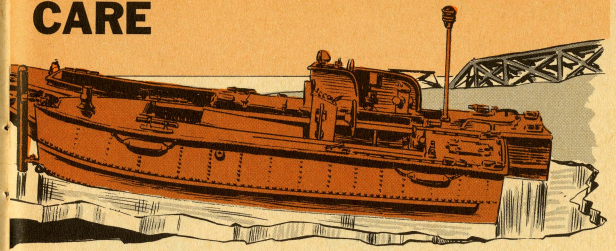


. . . and from under the manifold.

On boats with two cooling systems for each engine, also take out the drain plugs from the auxiliary pump and exhaust lines.

After you take out all those plugs and drain the system with the boat in the water, there'll still be some coolant left in the heat exchangers. To get it out, take

COLD WEATHER CARE



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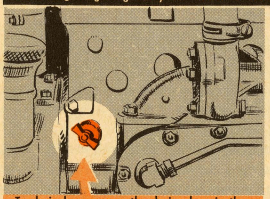

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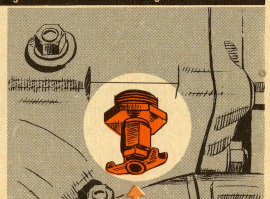

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After you take out all those plugs and drain the system with the boat in the water, there'll still be some coolant left in the heat exchangers. To get it out, take the boat out of the water and remove the plugs from the front end of the heat exchangers mounted under the boat. Just the front-end plugs will do the trick.

FILLING

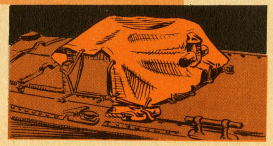
To get the right antifreeze solution for your boat, refer to the chart in the TM. For the 19-footer, page 40 of TM 5-8022 has the scoop. The 27-footer is covered on page 67 of TM 5-8025.

Watch it when putting in the antifreeze—it's easy not to get enough in the cooling system. First, open all the air vents. Then pour in antifreeze until you see it in the vents. Here's where to watch it, because the cooling system isn't full yet.

When you fill through the expansion tank, an air pocket forms in the exhaust system and heat exchangers. To get rid of the pocket, run the engine four or five minutes and then pour in more coolant. Go through the fill-and-run-and-fill-again routine a few times until the system has all it will take.

One more important thing on coolant: No matter how hard-up you get for it, don't put salt water in the cooling system.

OTHER CARE AND CAUTION

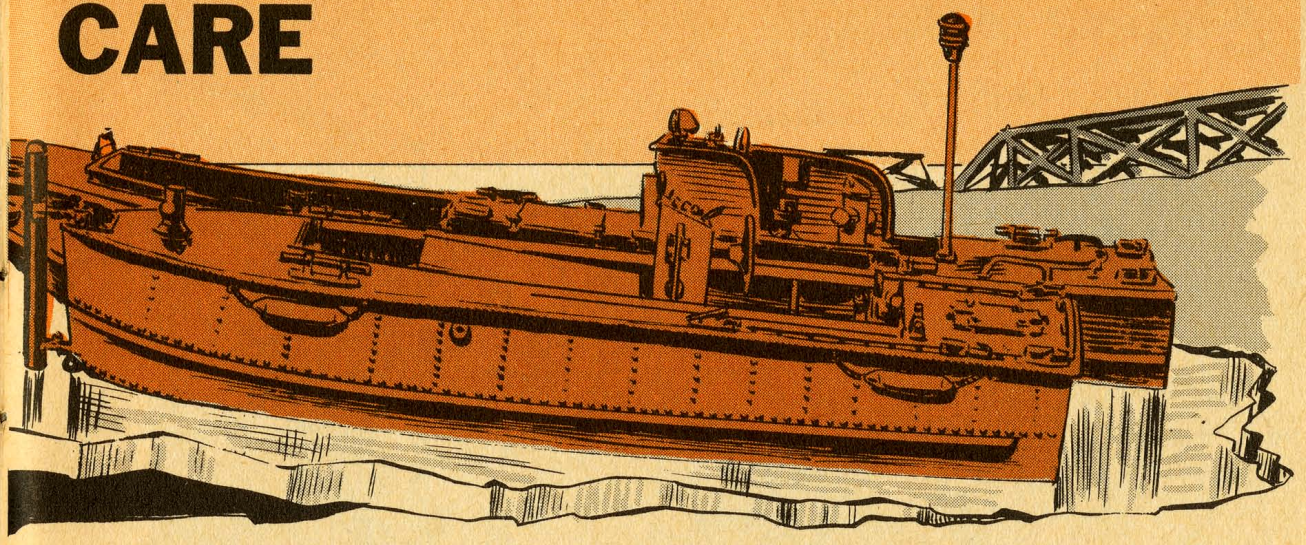


Keep the canvas covers on the instrument panel and cockpit when boats aren't in operation.

Naturally, batteries are high on the list when it comes to extra care and protection in cold weather. Keep 'em fully charged or as close to it as you can.

Always have the "bibles" for these power boats on hand for ready reference. TM 5-8022 and TM 5-8025 will get you—and keep you—out of trouble.

CARE



the boat out of the water and remove the plugs from the front end of the heat exchangers mounted under the boat. Just the front-end plugs will do the trick.

FILLING

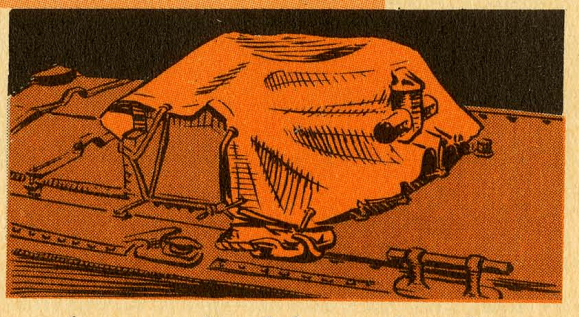
To get the right antifreeze solution for your boat, refer to the chart in the TM. For the 19-footer, page 40 of TM 5-8022 has the scoop. The 27-footer is covered on page 67 of TM 5-8025.

Watch it when putting in the antifreeze—it's easy not to get enough in the cooling system. First, open all the air vents. Then pour in antifreeze until you see it in the vents. Here's where to watch it, because the cooling system isn't full yet.

When you fill through the expansion tank, an air pocket forms in the exhaust system and heat exchangers. To get rid of the pocket, run the engine four or five minutes and then pour in more coolant. Go through the fill-and-run-and-fill-again routine a few times until the system has all it will take.

One more important thing on coolant: No matter how hard-up you get for it, don't put salt water in the cooling system.

OTHER CARE AND CAUTION



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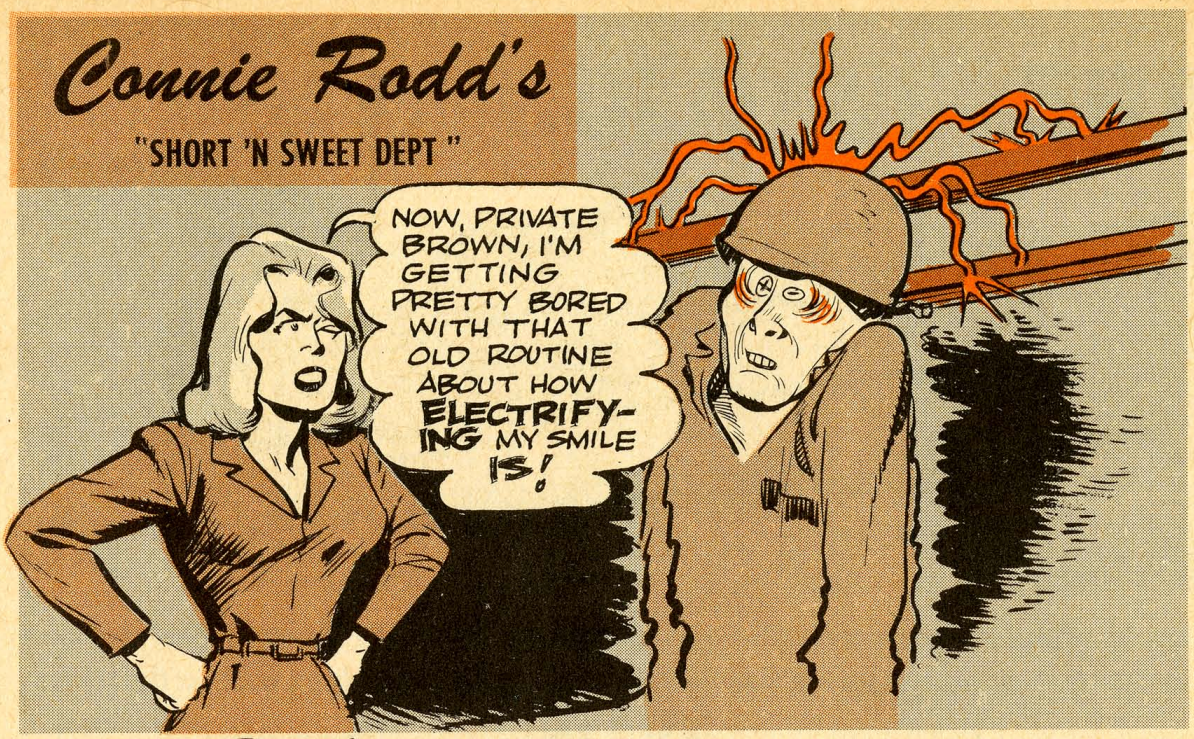
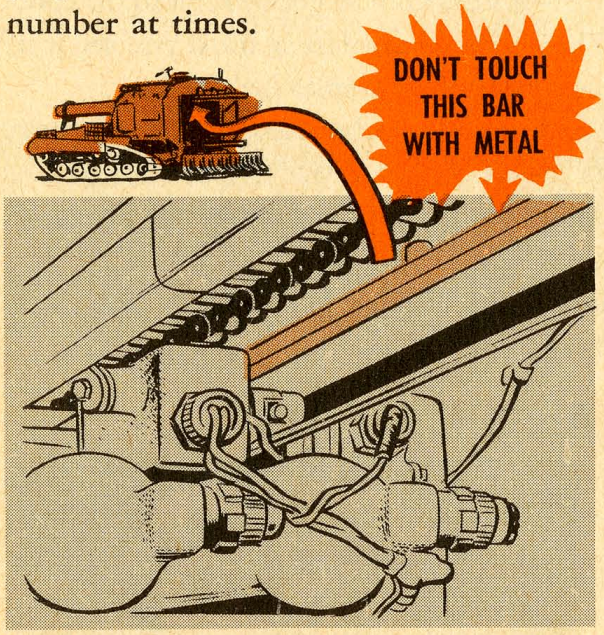


Hot bar

That "bus bar" in the ammunition hoist track assembly of your M55 self-propelled howitzers can be quite a hot number at times.



This is 'specially true if a steel helmet should accidentally rub up against it.

This bus bar runs along the underside of the track right next to the chain and becomes charged with current when the master relay switch is on. It serves to operate the hoist when brushes on the hoist rub across the face of the bar.

It'd be a good idea when working around 'em to be real careful not to get tangled up with the bar until an MWO comes out putting a guard around it. Just one touch with metal and you'll think you're in the middle of another Fourth of July fireworks. Sparks'll be flyin' every-which-way and could easily start a fire in your howitzer, or cause somebody to get burned.

Just one last thought: Keep the peepers wide open and head and helmet low when around that hoist.

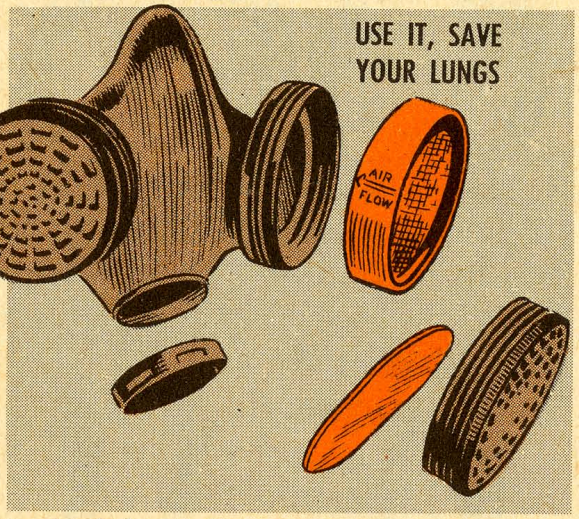
Breathe easy

If you insist on carrying a lot of lead around with you, there's just one place for it—your pencil. Not in your lungs or any other part of the body.

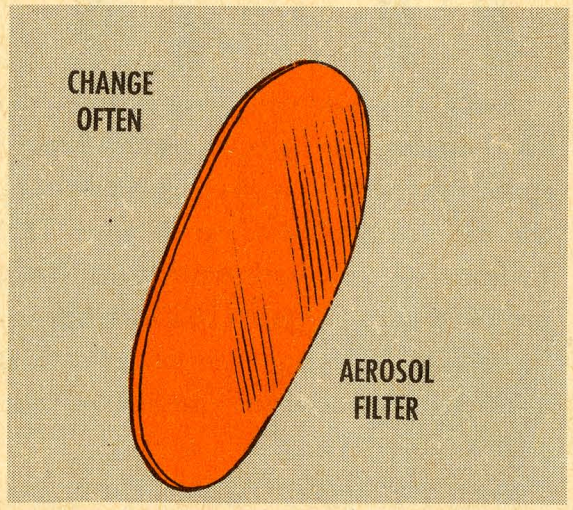
Lead poisoning—the type you can get by inhaling spray from paint and other

stuff containing lead—can be just as fatal as the type you can get by dropping an ace from your sleeve.

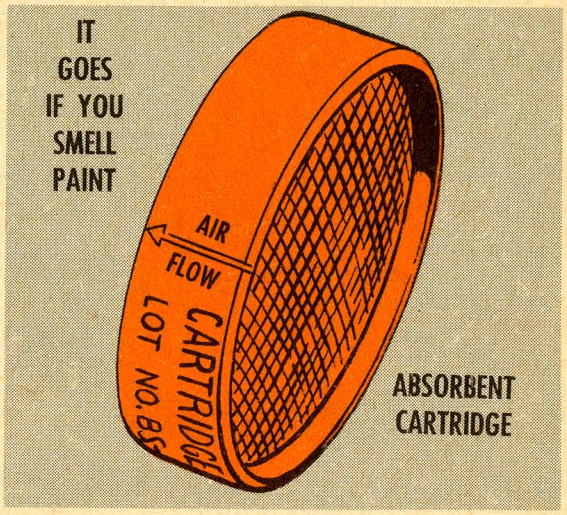
Take spray painting, 'specially. There's entirely too much paint in the air for your safety. So you use the paint respirator, M5 (Respirator, Air Filtering, Paint Spray, M5, FSN 4240-368-6150). No matter how brief the job is. That respirator's a lot easier to clean than your lungs.



And don't forget, change your filter often to insure good breathing. For a bag of filters ask for Filter, Respirator, Air Filtering, M11, FSN 4240-203-3887.



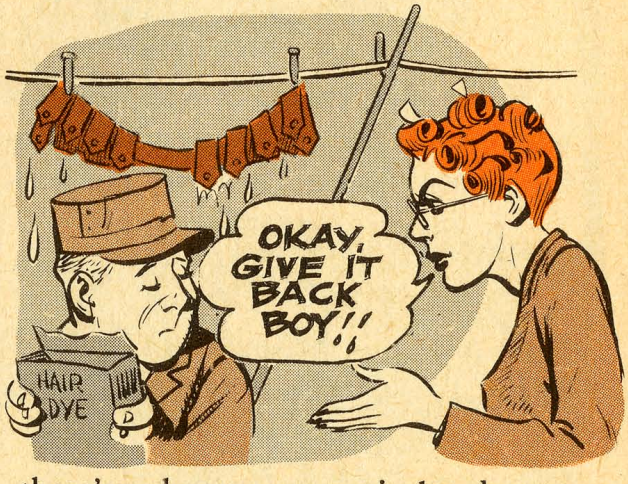
The cartridge needs replacing if you can smell paint while you're wearing your respirator. You can get replacement by ordering Cartridge, Respirator, Air Filtering, M2, FSN 4240-203-2886.



Caught in the web

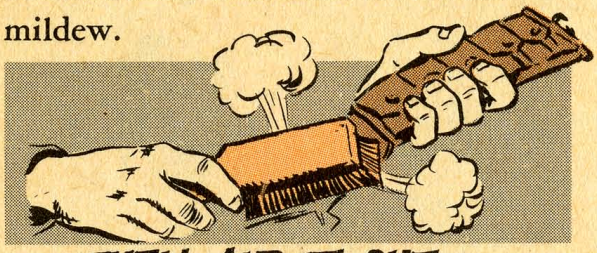
There's a new Army-wide SOP on webbing equipment you'd best latch on to. It was brought about because some people were trying to re-dye that equipment back to its original color. This won't work.

The dope's been laid down in DA Circular 700-40 (25 Apr 58). It says web equipment will **not** be re-dyed — that

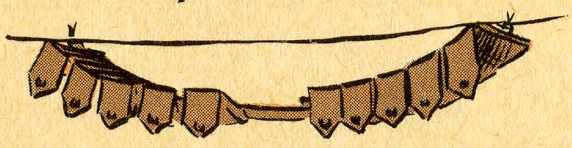


there's no known economical re-dye process that will make the equipment look like it used to.

Awright—so how do you keep that web stuff from fading? Easy enough. First, dry-brush it often with a stiff-bristle brush. This removes all dirt and mildew.



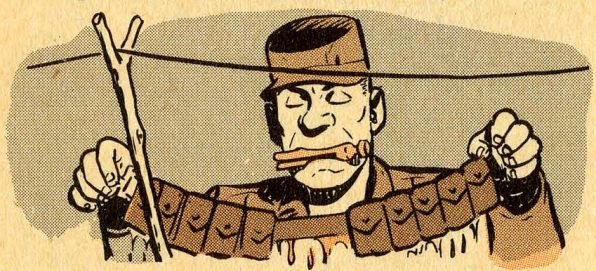
THEN, AIR IT OUT



If dry-brushing doesn't remove all dirt and stains, here's what to do—

Wash the webbing in warm water and a mild soap. Whatever you do, never use yellow GI soap, cleaning fluid or a dye — these could bleach the webbing. Make doubly sure that you rinse out all the soap.

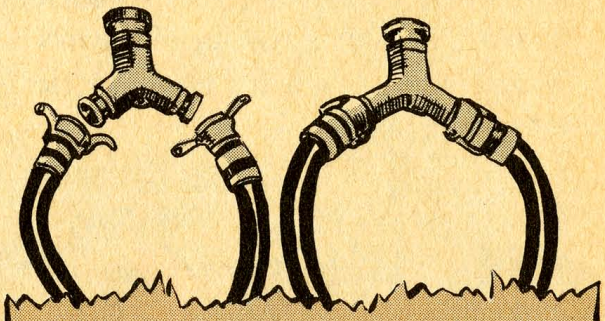
While the webbing is wet, stretch it to its original length. Water makes webbing shrink some. Then, dry the webbing in the shade or indoors. Never put it in the sunlight to dry, because the sun will bleach or fade the stuff.



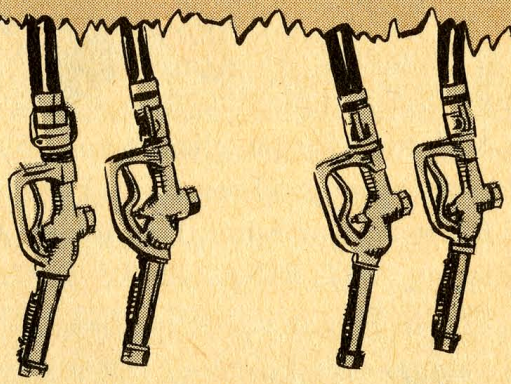
Hoses and nozzles

How's your hose situation? Got enough? They long enough?

Hear tell of some outfits that've been hurting for extra hoses, connections and nozzles to go with their 50-GPM gasoline dispensers.



That extra hardware comes in a Hose and Fitting Kit (FSN 4720-375-1528) which gives you two "Y" branches, four 25-foot discharge hoses (1-in dia), and four dispensing nozzles.

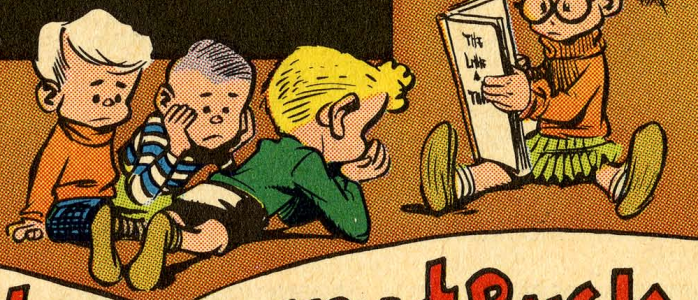


Since it gives you four outlets, the kit'll double your gas output and really speed up operations. And don't sweat if the kit doesn't show up in your TOE (which only lists your outfit's minimum requirements). If you need 'em they can be had by justifying your need for them as per the instructions found in the front part of your TOE's.

Any justification that'll show how your operation is improved and speeded up is bound to put the kit in your hands.

JOE'S DOPE

IT'S IN YOUR HANDS



The Little Army Truck

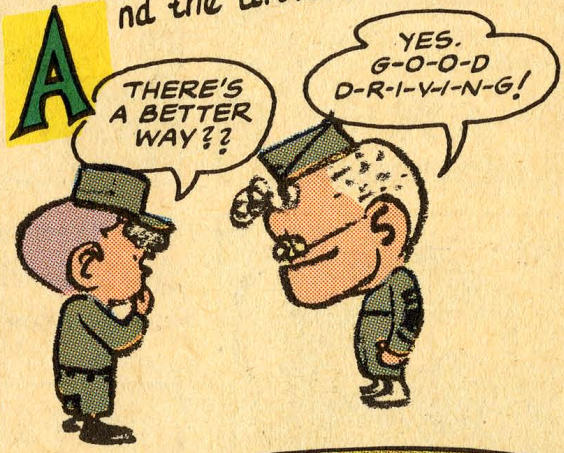
Once upon a time there was a camp of soldiers and it was their job to drive and handle the Army's trucks.

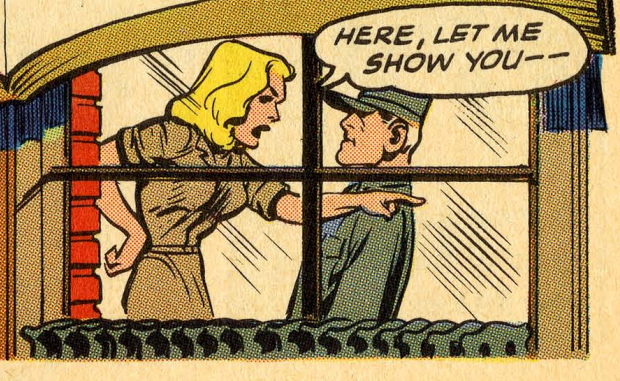
These trucks cost lots of money and were very valuable to the people who paid the soldiers' salaries.

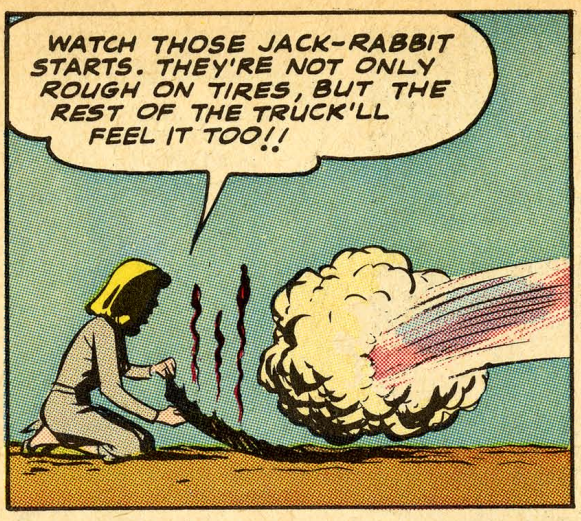
So, naturally they expected the soldiers to take care of 'em. Only some of them didn't on account of they didn't know the tricks of the trade.

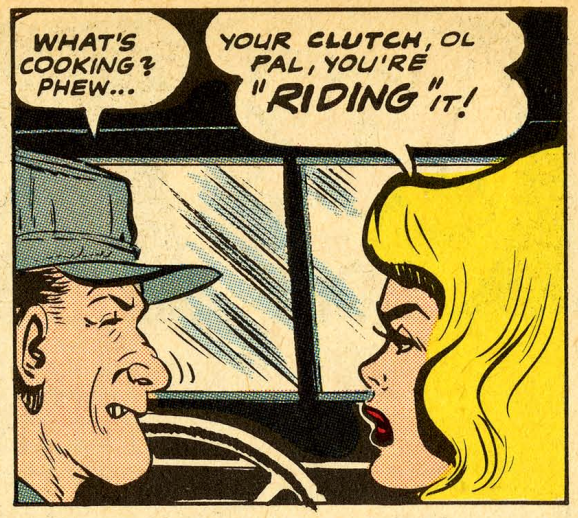
One day the sergeant said,

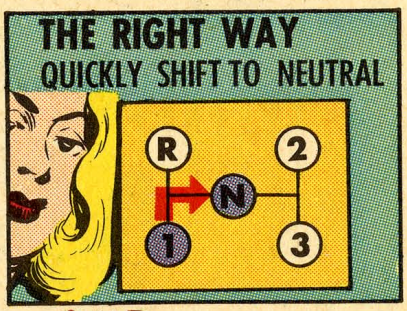
And the driver, he said,

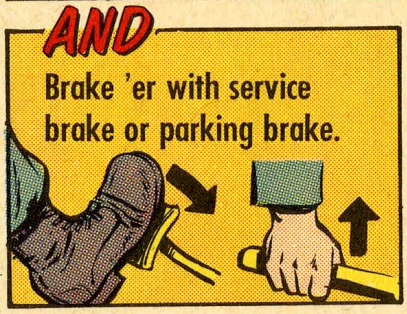


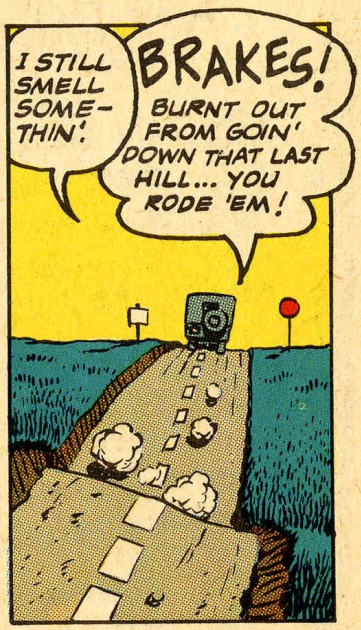


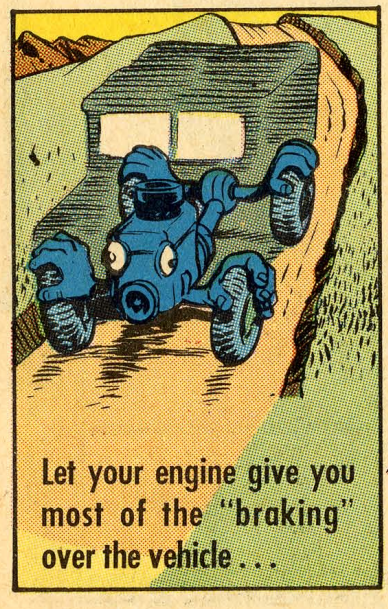




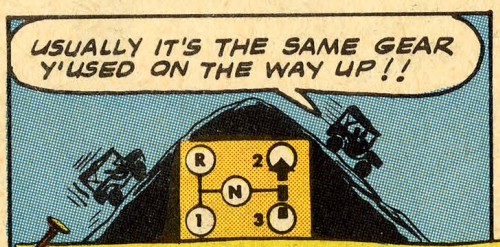








Use your engine as a brake by **DOWN SHIFTING** into the right gear BEFORE you start down a hill . . .



BUT if you pick up a load on the top of the hill—or if the ground becomes rough . . . shift into a **LOWER** gear . . .

"Hopping" a curb, or...

banging your tires against curbs is **MURDER!**

QUICK STOPS are another tire killer . . .

SCREEEE

. . . and may send your passengers airborne!

Quick stops are for emergencies.

Going too fast over rough roads could throw your buggy into shock...loosen its joints

and make a parts replacement jam up in your outfit.

SO TAKE IT EASY AND SAVE THE PARTS.

Trying to turn that steering wheel without getting a little motion into the truck is hard on the steering system—besides leaving good rubber on the pavement.

AN INCH OR TWO OF MOVEMENT FROM YOUR TRUCK COULD STOP THIS.

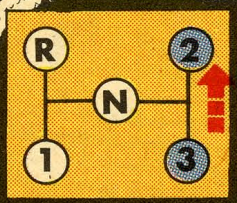
JOE'S Dope Sheet
How your t
On how we
With driv
Good loc
Your truck
CAREFUL DOWN HILL
DON'T DRIVE FAST ON ROUGH TERRAIN
NO JACKRABBIT STARTS
DON'T STOP ON A DIME
WE HAVE THE WORLD'S BEST EQ

JOE'S Dope Sheet
How your truck operates will depend
On how well you hold up YOUR end.
With driving that's tops,
Good loads, starts and stops,
Your truck's like a tried and true friend.
CAREFUL DOWN HILL
DON'T DRIVE FAST ON ROUGH TERRAIN
NO JACKRABBIT STARTS
DON'T STOP ON A DIME
LOAD YOUR TRUCK PROPERLY
WE HAVE THE WORLD'S BEST EQUIPMENT ...Take care of it

QUIPMENT ... *Take care of it*

When it comes to pullin' up-hill, use the proper gear.

If you're in high, shift to an intermediate gear



'CAUSE IF YOU DON'T, YOUR ENGINE'S GONNA START LUGGIN' FOR SURE.

Improper loading is another truck killer . . .

MAKE SURE LOAD IS EVENLY DISTRIBUTED.

USE YOUR HAND BRAKE TO HOLD THE TRUCK STILL WHEN YOU'RE STOPPED.

NEVER USE THE HAND BRAKE TO STOP THE TRUCK UNDER NORMAL CONDITIONS OR YOU'LL WEAR IT OUT FAST.

there may be times when you have to use it . . .

SCREECH

BRIDGE OUT

BUT THOSE ARE EMERGENCIES AND SHOULDN'T HAPPEN TOO OFTEN!

IF EMERGENCIES HAPPEN OFTEN, THE VEHICLE ISN'T GETTING ENOUGH PM OR SOMETHING'S WRONG WITH THE WAY THE TRUCK IS BEING DRIVEN!

THE SHIFT PATTERN FOR YOUR TRUCK IS RIGHT ON THE DASH. Y'CAN'T MISS IT...

FRONT
TRANSMISSION
R 2 N 1 3
TRANSFER CASE
OUT LOW
IN N
FRONT AXLE DRIVE HIGH

MAKE SURE YOU HIT ALL THE GEARS WHEN SHIFTING, NO SKIPPING.

FIRST
SECOND
THIRD
and REVERSE

OF COURSE, ON SOME OF YOUR TRUCKS YOU CAN SKIP FIRST GEAR WHEN STARTING OFF, PROVIDING THE TRUCK'S NOT LOADED.

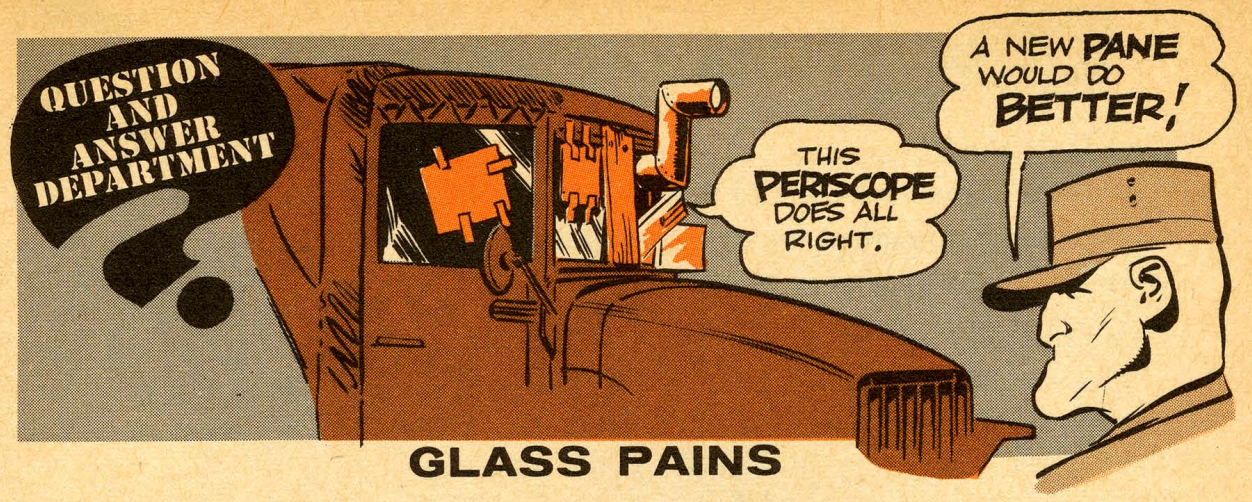
NATURALLY, TO SAVE WEAR AND TEAR ON THAT ENGINE, YOU SHOULD PUT HER THROUGH A WARM-UP PERIOD BEFORE STARTING ON A RUN-- IF CONDITIONS PERMIT, THAT IS...

While your engine is idling, check gages, and instruments to see if everything is OK.

042479
MILES PER HOUR
LEVEL
FUEL
TEMP F
HIGH BEAM
PRESS

ALSO LISTEN TO BE SURE SHE'S PERCOLATING ON ALL CYLINDERS.

BUT THE BEST ALL-AROUND ADVICE I CAN GIVE YOU IS USE COMMON SENSE... LEARN TO THINK ABOUT WHAT YOU'RE DOING... AND YOUR VEHICLE WILL GIVE ITS BEST.
AND THAT'S THE END OF THE STORY!
DID YOU LIKE IT, OSGOOD?
YUP
DID IT MOVE YOU EMOTIONALLY?
YUP
THEN, ARE YOU GONNA STOP RUNNING OVER MY DOLLY... AND SMASHIN' UP LITTLE SEBASTIAN'S TRUCK??
NOPE!
POW
WAAAAAAAAA
I'M THINKIN' OF GETTIN' TRANSFERRED OUT OF THIS CHICKEN OUTFIT... KNOW ANYONE IN PERSONNEL?



GLASS PAINS

Dear Sgt Dozer,

Here is my problem—from time to time the question comes up as to how bad does glass have to be in vehicles to be replaced? It seems like everybody has a different opinion on the subject. I would like to know if there's any publication which gives the serviceability standards for vehicle glass.

Lt A. E. L.

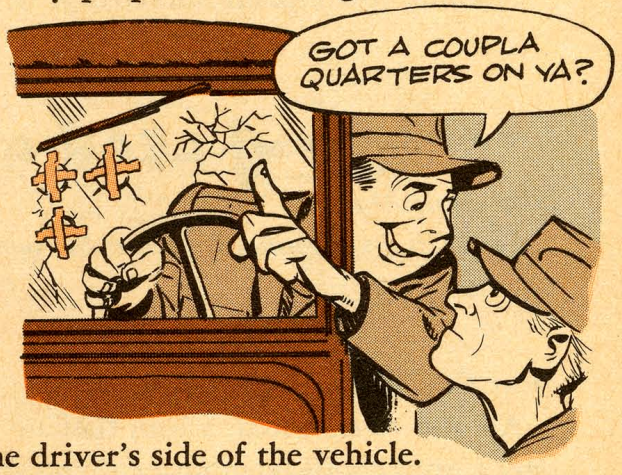
Dear Lt A. E. L.,

Replacing glass is another one of those things that we've got no regs on and you've got to use your own judgment. However, the inspection standards used by the state and local department of highways in your area should clue you as to when replacement is necessary. At the same time, if local directives and your SOP give you a set of standards—that's the set you follow.

Here are a few thoughts to keep in mind when you're giving the glass the once-over . . . replace when:

A crack or any discoloration interferes with the driver's vision.

There's a cloudy area that shows the safety properties of the glass have been destroyed.



There's a shattered area or defect that can't be covered with a 25-cent piece—except for minor cracks that don't extend higher than three inches from the bottom and don't interfere with vision.

When both layers of door glass are cracked.

The glass has cracks with sharp edges.

When glass is cracked or broken on the driver's side of the vehicle.

Safety is the main thing to consider when you're inspecting the glass in any vehicle—and it's up to the inspector to determine if replacement is necessary. His say-so makes it so.

Sgt Dozer

TM THOUGHT

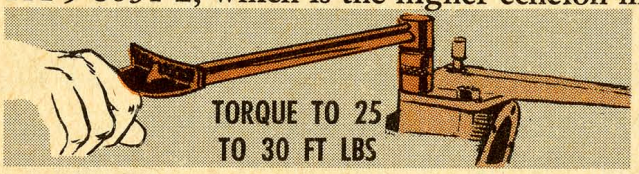
Dear Half-Mast,

It doesn't seem to be in TM 9-8030 on the G741-series ¾-ton trucks, so I'm asking you: When adjusting the steering knuckle bearings on these trucks, how much do you torque 'em?

Cpl P. R. P.

Dear Cpl P. R. P.,

The word is—to between 25 and 30 foot-pounds. And, the reason you won't find it in TM 9-8030 is that the job is left to your support unit. The poop is in TM 9-8031-2, which is the higher echelon manual.



What may throw a guy off is the fact that adjusting those steering knuckle bearings is an organizational job when it comes to the Jeep. But, on this truck, it's strictly higher echelon.

By the way, whenever you think you've found something left out of a TM which you think should've been included, you can do something about it. Right in the front of all TM's is this statement: "Any . . . technical inaccuracies noted in Department of the Army publications will be reported through technical channels, as prescribed in AR 700-38, to the Chief of Ordnance, Washington 25, D. C., ATTN: ORDFM, using DA form 468, Unsatisfactory Equipment Report. Such suggestions are encouraged in order that other organizations may benefit." 'Course nowdays you use DA Form 2028. You use this one on supply publications only.

Nothing like a good interchange of ideas to keep a good organization going.

LEAN AND FAST

Dear Half-Mast,

Settle us an argument, please, Sarge. Which burns faster, a rich fuel-air mixture or a lean one?

PFC J. J.

Dear PFC J. J.,

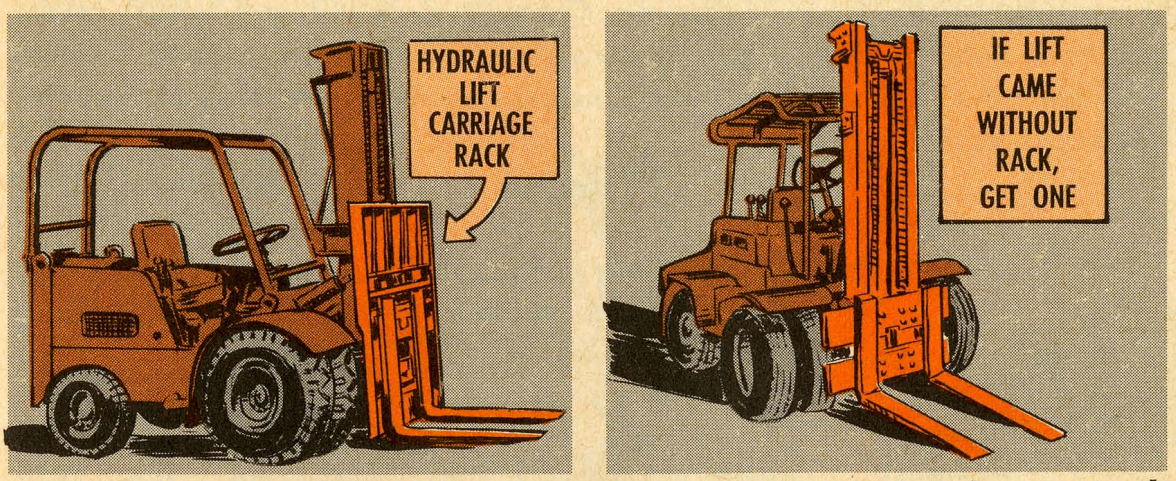
All else being equal, a lean fuel-air mixture, round about 17 parts air to one part gasoline will burn faster than the rich mixture of 13 parts air to one part gasoline. But remember, it also burns hotter, and may warp or burn your valves. Besides, you don't get the developed power or performance from the real lean mix.

Half-Mast

RACK 'EM UP

Dear Connie,

Some of our forklifts come equipped with hydraulic-lift carriage racks—and some don't.



Since they're top priority for safety and smooth operation, how do we get racks for lifts that don't have them as standard equipment? The supply manuals don't list them.

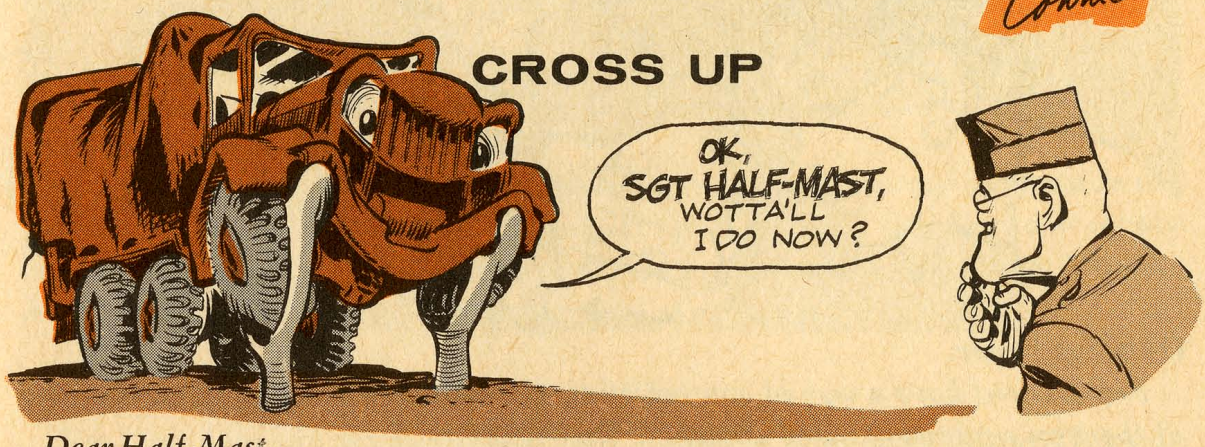
O. L. L.

Dear O. L. L.,

There's only one way to get those missing racks.

Send in a requisition through channels, giving the full lowdown on your vehicle—make, model, etc. Your justification for the item is that it wasn't supplied as original equipment and that it's needed for safe operation—both for the safety of the forklift operator and for the cargo itself.

Connie



Dear Half-Mast,

The rivets on some of our G742-series 2½-ton truck's crossmembers and front spring hangers are coming loose to the extent that they should be replaced. Can we do anything about this?

SFC B. F.

Dear SFC B. F.,

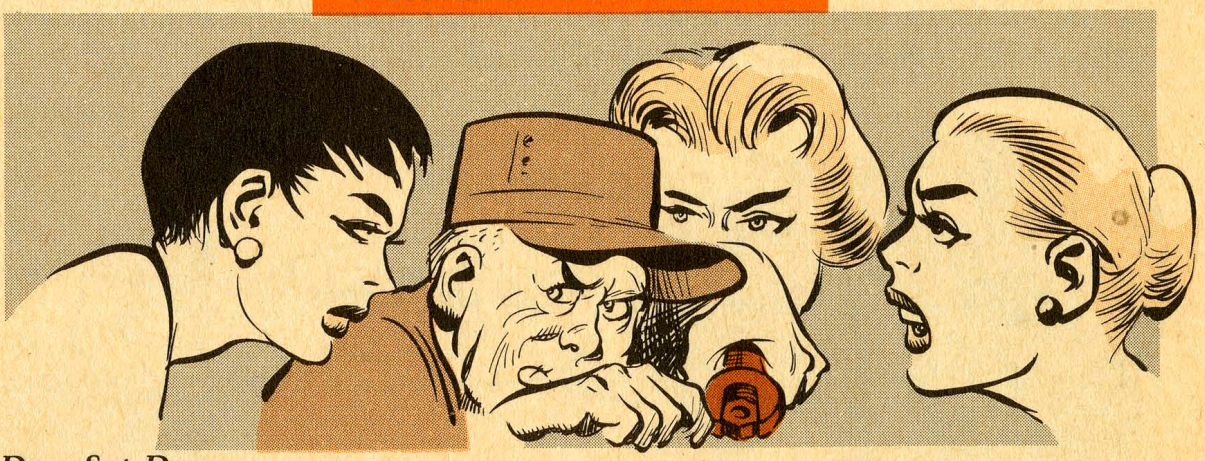
Heard tell of a few of these cases, but they're easy enough to fix and keep the truck in service.

On those trucks which are having this trouble, remove the rivets and drill the crossmember's holes to a ½-in diameter. Get some ½-in bolts and tighten 'em up with ½-in nuts and lockwashers—make sure they're tight by torquing the nuts to 75 foot-pounds. This'll keep those trucks going until your support unit can take a look at the thing.

Most important, if you're having this trouble, get an Unsatisfactory Equipment Report off immediately. Outline the problem and your recommendations, and send it to Chief of Ordnance, Department of the Army, Washington 25, D. C.

Half-Mast

PM BY THE PUB

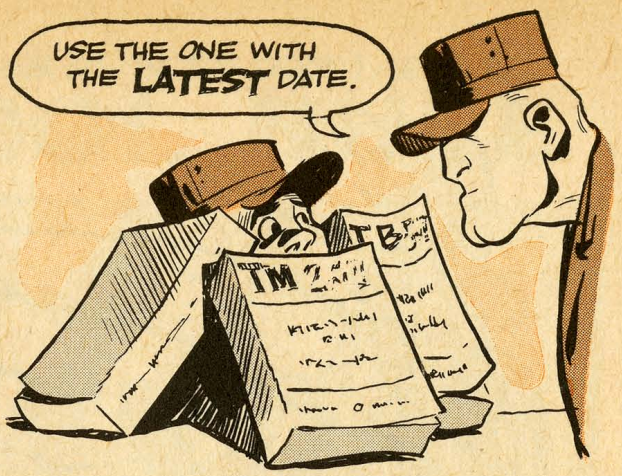


Dear Sgt Dozer,

Publications have a way of contradicting themselves, and we've got our share of them on equipment dated anywhere from 1944 to 1954.

Now, the question is—do we go by the TM, TB or LO for each piece of equipment? It seems no matter which one we use we get gigged for not using one of the others.

Sp3 C. McC.



Dear Sp3 C. McC.,

Like everything else—getting your share isn't always the answer. It's the latest date that counts.

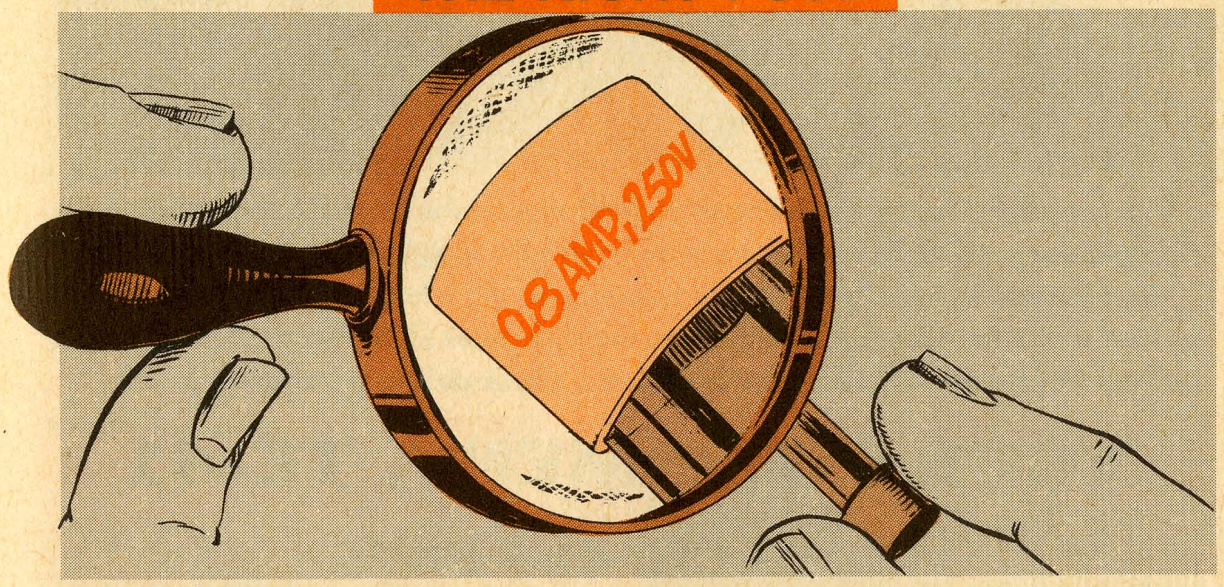
Each TM, TB and LO has a special purpose when it comes to maintaining your equipment. And, you need each one that your equipment rates when you're pulling your weekly or monthly PM services.

Now, in case there's a conflict among the instructions in your pubs, the publication with the later date is the one to use.

It's all down in black and white in AR 310-1, para 15.

Sgt Dozer

THE RIGHT FUSE



Dear Half-Mast,

As you know, we're supposed to use three .8-amp 250-volt slo-blo fuses in the acquisition antenna pressurization unit at our Nike-Ajax site. Since the supply manual doesn't have any of these fuses, we've been using the 1-amp 250-volt kind and it's not slo-blo. Do you have any suggestions?

Sgt A. H.

Dear Sergeant A. H.,

Yes. The fuse you want is FUSE, CARTRIDGE: time delay, 10 to 25 sec at 500% load 0.8 amp, 250V, glass body, one time, ferrule type term, ¼ dia x 1¼ lg, FSN 5920-296-4057. It's an Engineer item. Soon's you get a supply, remove those 1-amp jobs.

Half-Mast

FOR SIGNAL EQUIPMENT THAT GETS THE MESSAGE THRU . . .

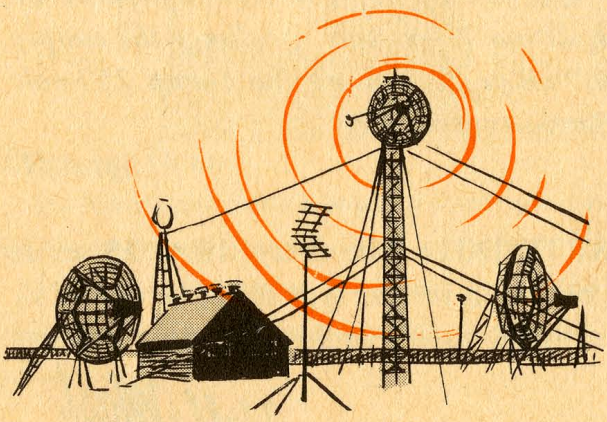
IT'S THE

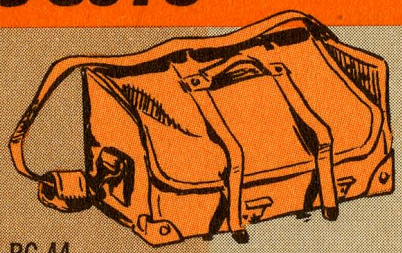
No fun using your naked fingers to pull a hot tube buried somewhere in the chassis. Likewise, no fun stripping wire without the right pliers for the job.

And the sparks usually fly on any radio repair job when a repairman forgets the golden tool rule: Use the right tool at the right time. They're all there, though, in Tool Equipment TE-41. Everything from a tube puller to stripping pliers.

TOOL EQUIPMENT, TE-41

FSN 5180-498-8973





BAG, BG-44

FSN 5140-498-8721

BRUSH, FLAT: camel's hair; ½ in w; double thick

FSN 7920-282-9242 (Eng)

FOR SIGNAL EQUIPMENT THAT GETS THE MESSAGE THRU . . .

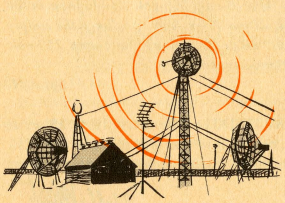
IT'S THE GOLDEN TOOL RULE

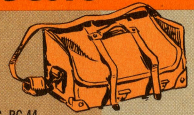
No fun using your naked fingers to pull a hot tube buried somewhere in the chassis. Likewise, no fun stripping wire without the right pliers for the job.

And the sparks usually fly on any radio repair job when a repairman forgets the golden tool rule: Use the right tool at the right time. They're all there, though, in Tool Equipment TE-41. Everything from a tube puller to stripping pliers.

TOOL EQUIPMENT, TE-41

FSN 5180-498-8973



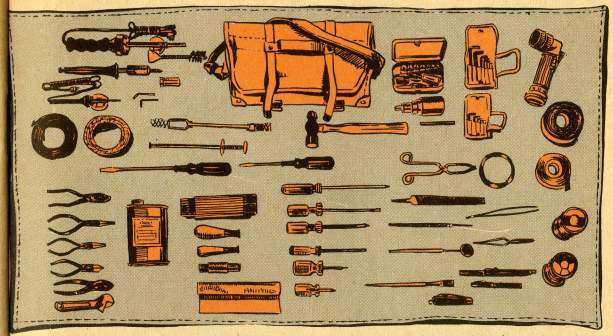


BAG, BG-44

FSN 5140-498-8721

BRUSH, FLAT: camel's hair; ½ in w; double thick

FSN 7920-282-9242 (Eng)



Y'might run through the list here, to check the gear in your TE-41 against the latest name and number. Could be some are missing . . . have new numbers . . . maybe even eliminated.

They're all Signal Corps items—unless otherwise labeled.

You'll see that these are the latest names and numbers according to the newest supply manuals.

BURNISHER, TL-557/U: contact; hand

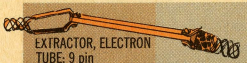
FSN 5120-223-9347

BLADE, CONTACT BURNISHER: 1¼ in lg x ¾ in ea w end

FSN 5110-223-9348

BLADE, CONTACT BURNISHER: 1¼ in lg o/a x .024 in dia

FSN 5110-223-9349



EXTRACTOR, ELECTRON TUBE: 9 pin

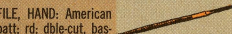
FSN 5120-508-0584

EXTRACTOR, ELECTRON TUBE: 7 pin

FSN 5120-293-2696

FILE, HAND: American patt; fl; dble-cut; sec-cut; 8 in heel to pt

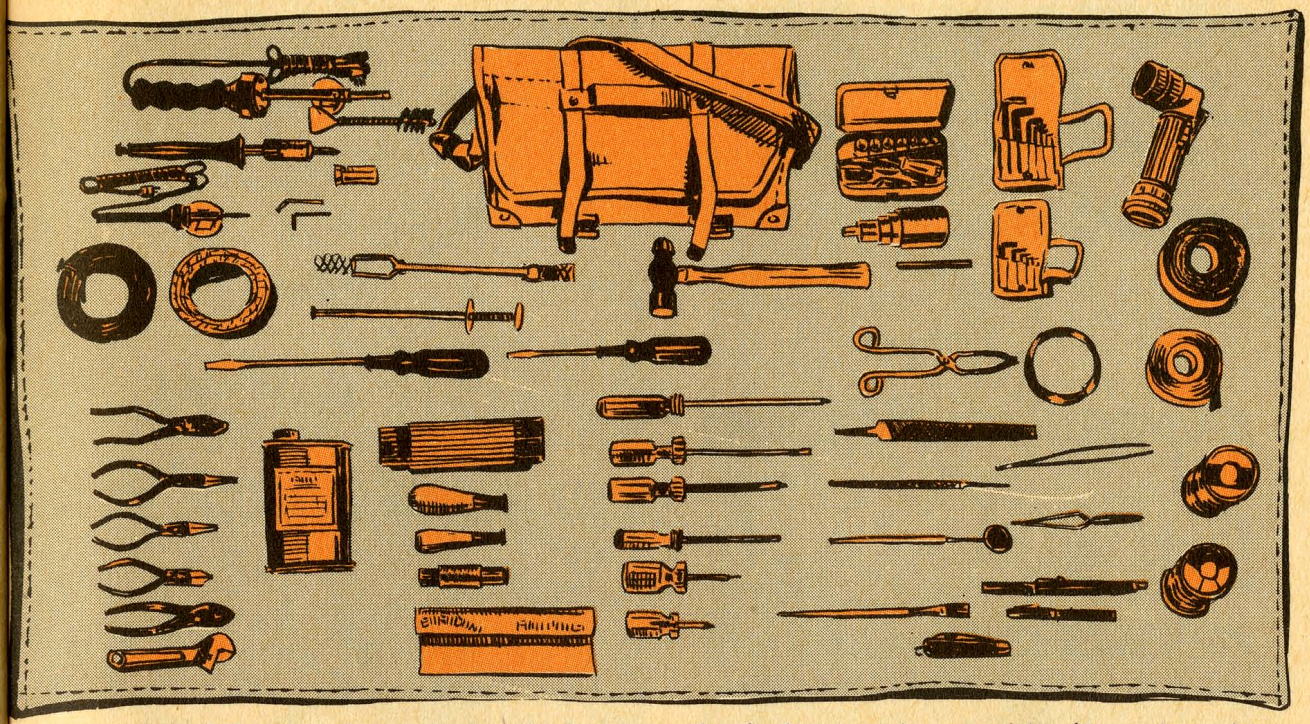
FSN 5110-234-6534 (Ord)



FILE, HAND: American patt; rd; dble-cut, bastard cut; 6 in heel to pt

FSN 5110-234-6548 (Ord)

GOLDEN TOOL RULE



Y'might run through the list here, to check the gear in your TE-41 against the latest name and number. Could be some are missing . . . have new numbers . . . maybe even eliminated.

They're all Signal Corps items—unless otherwise labeled.

You'll see that these are the latest names and numbers according to the newest supply manuals.

BURNISHER, TL-557/U: contact; hand

FSN 5120-223-9347

BLADE, CONTACT BURNISHER: 1¼ in lg x 3/16 in ea w end

FSN 5110-223-9348

BLADE, CONTACT BURNISHER: 1¼ in lg o/a x .024 in dia

FSN 5110-223-9349

EXTRACTOR, ELECTRON TUBE: 9 pin

FSN 5120-508-0584

EXTRACTOR, ELECTRON TUBE: 7 pin

FSN 5120-293-2696

FILE, HAND: American patt; fl; dble-cut; sec-cut; 8 in heel to pt

FSN 5110-234-6534 (Ord)

FILE, HAND: American patt; rd; dble-cut, bastard cut; 6 in heel to pt

FSN 5110-234-6548 (Ord)

FLASHLIGHT, MX-991/U: batt operated; right angle tubular case; 8 3/8 in lg x 1 7/8 in dia o/a

FSN 6230-264-8261

LAMP, INCANDESCENT: 2.7 volts; .15 amp

FSN 6240-155-7935

LENS, DIFFUSION:

FSN 6760-356-4825

FILTER, BLACKOUT:

FSN 6230-300-8098

HAMMER, HAND: machst; ball-peen 3/4 lb

FSN 5120-224-4082 (Ord)

HANDLE TL-14: file; wood; small size

FSN 5110-408-1272

HANDLE (TL-215) FILE, WOOD: med; 1 1/4 in dia of hand grip

FSN 5110-263-0349 (Ord)

FINGER, MECHANICAL (TL-506/U) spg; 4 finger, solid 8 in reach; 10 3/4 in lg

FSN 5120-288-8716 (Ord)

INSULATION TAPE, ELECTRICAL TL-83: black adhesive cotton; 3/4 in w

FSN 5970-184-2003

INSULATION TAPE, ELECTRICAL TL-636/U: non-adhesive; 3/4 in w

FSN 5970-296-1175

KNIFE, POCKET (TL-29) cutting blade 2 3/8 in min to 2 7/16 in max length, w/screwdriver and wire scraper

FSN 7340-240-5943 (QM)

MIRROR, DENTAL TYPE: 6 3/4 in lg

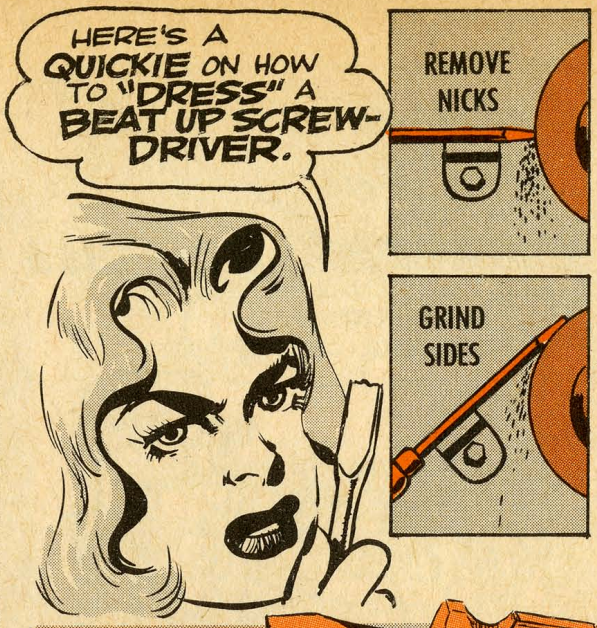
FSN 5120-448-2455

PAPER, ABRASIVE: flint, rope or wood-fbr-paper-backing, 9 x 10 3/0

FSN 5350-271-7939 (Ord)

PLIERS (TL-13-A): lineman's; sidecutting w/ wire skinner; 6 in lg

FSN 5120-247-2063 (Ord)



PLIERS, DIAGONAL CUTTING (TL-103) 5 in lg

FSN 5110-224-1896 (Ord)

PLIERS (TL-126): lg rd nose (chain); w/o cutter; 6 in lg

FSN 5120-268-3579 (Ord)

PLIERS: short rd nose; w/o cutter; 6 in lg

FSN 5120-240-6172 (Ord)

PLIERS, SLIP JOINT: stght nose, comb, w/ cutter; 6 in lg

FSN 5120-223-7396 (Ord)

RULE, MULTIPLE FOLDING: wood, 6 ft extended lg; 12 sections

FSN 5210-233-6996 (Ord)

SCREWDRIVER, CROSS TIP (TL-469/U) recessed screw Phillips No 1 tip; 1 in lg blade

FSN 5120-224-7370 (Ord)

SCREWDRIVER, FLAT TIP (TL-15): woodhdl. flared tip; 2 in lg blade

FSN 5120-236-3245 (Ord)

SCREWDRIVER, FLAT TIP (TL-456/U): plastic hdl, stgt tip; 4 in lg

FSN 5120-596-1183 (Ord)

SCREWDRIVER, CROSS TIP (TL-457/U): recessed Phillips No 2 tip; 4 in lg blade

FSN 5120-234-8913 (Ord)

SCREWDRIVER, FLAT TIP (TL-358/U): wood hdl, flared tip; 4 in lg blade

FSN 5120-277-9491 (Ord)

SCREWDRIVER, FLAT TIP (TL-360/U): plastic hdl, stght tip; 6 in lg blade

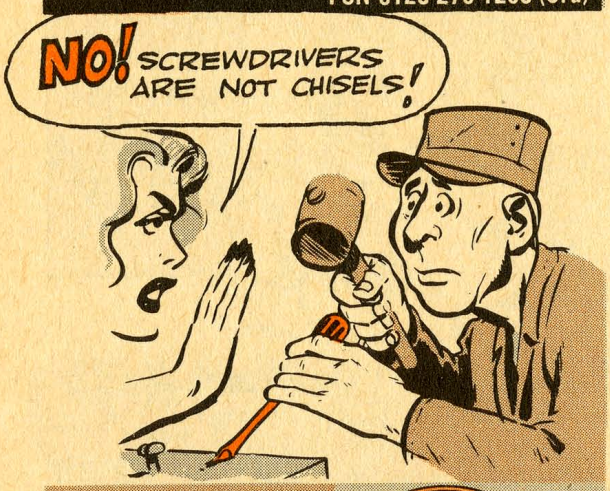
FSN 5120-227-7356 (Ord)

SCREWDRIVER, CROSS TIP: Phillips type; point no 1, 8 in lg blade

FSN 5120-537-8694

SCREWDRIVER, FLAT TIP (TL-459/U): w/ wrench grip; plastic hdl; 8 in lg blade

FSN 5120-278-1280 (Ord)



SOLDER, TIN ALLOY: w/ resin core/60/40; 1⅛ in dia

FSN 3432-269-9610

SOLDER, TIN ALLOY: w/ resin core/60/40; ⅛ in dia

FSN 3432-273-2536

SOLDERING IRON, ELECTRIC (TL-117): ⅜ in dia tip; 115 v; 85 w ac

FSN 3432-241-3221 (Ord)

TIP, ELECTRIC SOLDERING IRON: ⅜ in dia plug type w/setscrew mtg

FSN 3432-273-3727

SOLDERING IRON TL-606A/U: w/⅛ in dia plug type tip; max lg wo tip-6 in

FSN 3432-240-5641

TIP, SOLDERING IRON: plug type; ⅛ in dia by 3 in lg

FSN 3432-273-2683

TIP, SOLDERING IRON: plug type; ⅛ in dia by 3 in lg, 30 deg bend

FSN 3432-293-4709

SOLDERING IRON, NON ELECTRIC (Cartridge Type)

FSN 3432-588-1007

BRUSH, WIRE: for cleaning cartridge chamber

FSN 5920-577-4057

CARTRIDGE, KEMODE NO QS OR EQUAL:

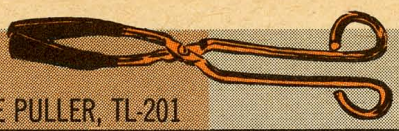
FSN 3375-569-9927

TOOL, ALINEMENT TL-385/U: 5 in long

FSN 5120-356-4352

TOOL, PIN STRAIGHTENing: 3⅞ in lg for 7 & 9 pin tubes

FSN 5120-392-8361



TUBE PULLER, TL-201

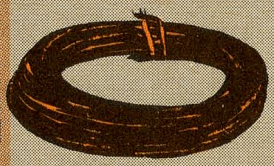
FSN 5120-498-8903

TWEEZERS: 6½ in lg; cross locking

FSN 5120-498-8970

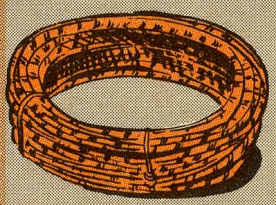
TWEEZERS, CRAFTSMAN'S (TL-379/U): bent pt, 6 in lg over-all

FSN 5120-596-1226



WIRE, ELECTRICAL: ins; stranded, black, tinned copper, no 18 AWG

FSN 6145-160-5176

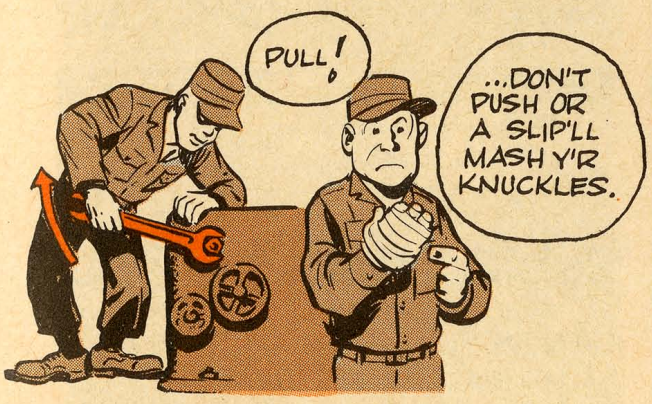


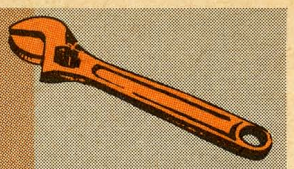
WIRE, ELECTRICAL: ins; rd stranded, white w/ red tracer, tinned copper, no 18 AWG

FSN 6145-548-0973

WIRE, ELECTRICAL: bare; no 18 AWG solid SD copper, tinned

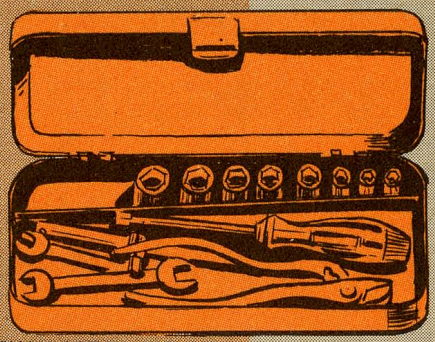
FSN 6145-128-8682





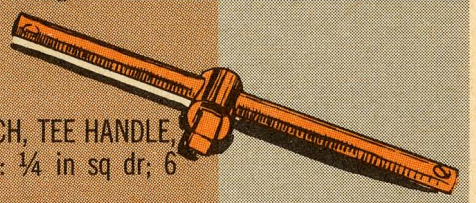
WRENCH, OPEN END, ADJUSTABLE (TL-111): sgle hd; 0 to 0.760 in jaw opng, 6 in lg

FSN 5120-264-3795 (Ord)



WRENCH SET TL-483/U: comb midget socket; ¼ in sq drive and double open end

FSN 5120-408-2164



WRENCH, TEE HANDLE, sliding: ¼ in sq dr; 6 in lg

FSN 5120-243-7325 (Ord)

WRENCH, OPEN END, FIXED, 15 deg angle, dble head, 13/64 in and 7/32 in openings; 3 in lg

FSN 5120-228-9528 (Ord)

WRENCH, OPEN END, FIXED: 15 deg angle, dble head, 15/64 in and ¼ in openings; 3 in lg

FSN 5120-278-2421 (Ord)

WRENCH, OPEN END, FIXED: 15 deg angle, dble head, 5/16 and 3/8 in openings; 3¾ in lg

FSN 5120-277-2307 (Ord)

WRENCH, OPEN END, FIXED: 11/32 in and 3/32 in openings; 3½ in lg

FSN 5120-293-2140

HANDLE, SOCKET WRENCH: 9/32 in drive end; 4½ in lg overall

FSN 5120-240-1421 (Ord)

SOCKET, SOCKET WRENCH: ¼ in sq-drive; hex, 3/16 in opng

FSN 5120-236-2262 (Ord)

SOCKET, SOCKET WRENCH: ¼ in sq-drive; hex; 7/32 in opng

FSN 5120-236-2263 (Ord)

SOCKET, SOCKET WRENCH: ¼ in sq-drive; hex, ¼ in opng

FSN 5120-236-2264 (Ord)

SOCKET, SOCKET WRENCH: ¼ in sq-drive; hex; 9/32 in opng

FSN 5120-242-3345 (Ord)

SOCKET, SOCKET WRENCH: ¼ in sq-drive; 12 pt, 5/16 in opng

FSN 5120-235-5878 (Ord)

SOCKET, SOCKET WRENCH: ¼ in sq-drive; 12 pt, 11/32 in opng

FSN 5120-242-3351 (Ord)

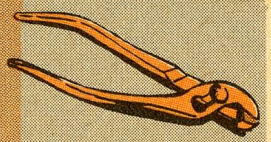
SOCKET, SOCKET WRENCH: ¼ in sq-drive; 12 pt; 3/8 in opng

FSN 5120-242-3352 (Ord)

SOCKET, SOCKET WRENCH: ¼ in sq-drive; 12 pt, 7/16 in opng

FSN 5120-235-5869 (Ord)

PLIERS, SLIP JOINT: angle nose, multiple tongue and groove, 5 in lg



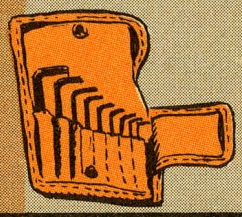
FSN 5120-278-0350 (Ord)

A SURE WAY TO MESS UP TOOLS

CASE: for Wrench Set TL-483/U, metal, 6¾ in lg x 2 15/16 in wd x 1¼ in h

FSN 5140-356-3874

WRENCH SET: set of 10 short arm keys; L handle; Allen type; socket head; hex



FSN 5180-408-2324

WRENCH, SOCKET HEAD SCREW: hex; 0.035 in across flats

FSN 5120-198-5400

WRENCH, SOCKET HEAD SCREW: hex; 0.050 in across flats

FSN 5120-198-5401 (Ord)

WRENCH, SOCKET HEAD SCREW: hex; 1/16 in across flats

FSN 5120-198-5398 (Ord)

WRENCH, SOCKET HEAD SCREW: (hollow-hd) hex; plug, reg short arm series; 5/64 in hex

FSN 5120-224-2504 (Ord)

WRENCH, SOCKET HEAD SCREW: hex; plug; reg long arm series; 5/64 in hex

FSN 5120-293-0080 (Ord)

WRENCH, SOCKET HEAD SCREW: hex; 3/32 in across flats; 2 in arm lg

FSN 5120-242-7410 (Ord)

WRENCH, SOCKET HEAD SCREW: hex; plug; reg long arm series; 1/8 in hex

FSN 5120-198-5412 (Ord)

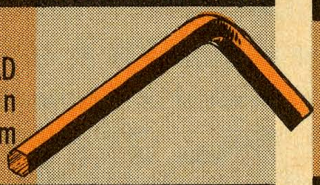
WRENCH, SOCKET HEAD SCREW: hex; plug, reg short arm series; 3/32 in hex

FSN 5120-198-5392 (Ord)

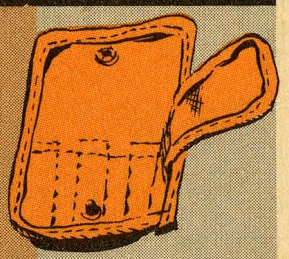
WRENCH, SOCKET HEAD SCREW: hex; plug, reg short arm series; 7/32 in hex

FSN 5120-242-7411 (Ord)

WRENCH, SOCKET HEAD SCREW: hex; 1/4 in across flats; 3 1/4 in nom lg arm lg

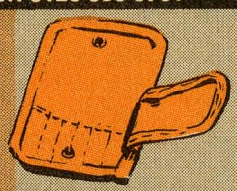


FSN 5120-224-4659 (Ord)



BAG, TOOL STORAGE:

FSN 5120-509-9791

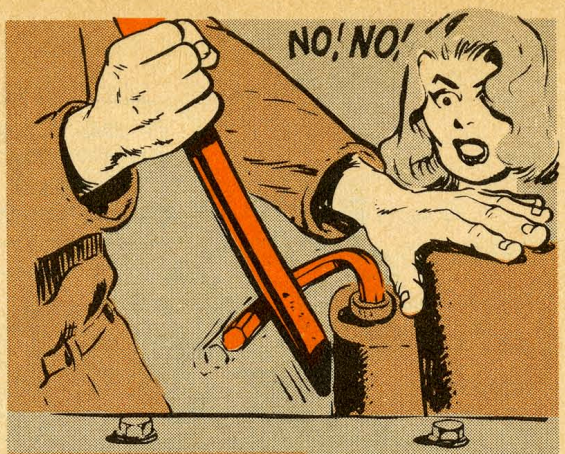


WRENCH SET; SOCKET HEAD SCREWS: fluted

FSN 5120-408-2262

WRENCH, SOCKET HEAD SCREW: splined; 6 flutes; 0.060 in major dia

FSN 5120-293-0195 (Ord)



WRENCH, SOCKET HEAD SCREW: splined; 4 flutes; 0.076 in major dia

FSN 5120-249-9670 (Ord)

WRENCH, SOCKET HEAD SCREW: fluted socket; splined hd; 6 flutes; 0.094 in dia

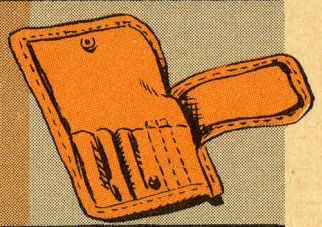
FSN 5120-223-6995 (Ord)

WRENCH, SOCKET HEAD SCREW: fluted socket; splined hd; 6 flutes; 0.110 in dia

FSN 5120-224-2482 (Ord)

WRENCH, SOCKET HEAD SCREW: splined; 6 flutes; 0.144 in major dia

FSN 5120-277-1724 (Ord)



BAG, TOOL STORAGE:

Signal Corps NO. 6Q2107-3

WRENCH SET, SPANNER: 5 cad pl steel, single head, fixed type pin spanner wrenches;

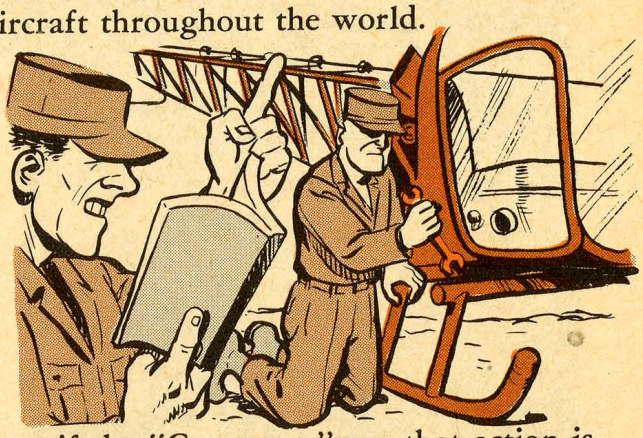
FSN 5180-393-2126

UER DIGEST

By now you have seen the TB AVN 23-5 series—the Unsatisfactory Equipment Report Digest.

TB AVN 23-5-1 (1 Jan 58) explains the purpose of these digests, and, incidentally, rescinds all published before that date.

This TB AVN series has a number of purposes. First of all, it'll tell you what difficulties are cropping up on Army aircraft throughout the world.



So naturally, if you read that somebody else has had some particular trouble, you'll be extra careful on your own inspections to see if it's happening to you.

Then, if you find one of your own problems written up in the UER Digest, you'll know other people have found it, too.

In this case you read the report, and see if the "Comments" say that action is continuing. If they are, you be sure to send in a UER of your own (DA Form 468) giving the details as you found 'em.

If the "Comments" say the project is closed, you know that there is no need for you to send in a UER, **unless** you find the corrective action listed in the TB AVN to be **unsatisfactory** or **incomplete.** That, you tell about.

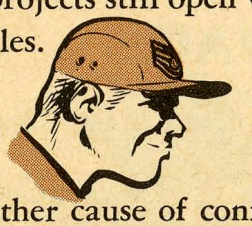
Watch this one—it's tricky. TB AVN 23-5's are **directive,** but, they also carry a lot of informational and discretionary information. So some of their stuff you **must** do; some of it you **may** do.

The points that are mandatory are clearly set out, and any action that requires a form entry will say so. Also, any time you're **required** to take action, the TB

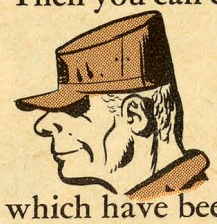
AVN is your interim authority for taking it. Later on the requirements will be put on a more formal basis in a permanent publication (TM1, TB AVN, AR or revisions.)

Another thing: When the TB AVN 23-5's interpret an existing directive (AR, TM1, etc.) the interpretation will be considered directive—"The Word."

Now, each one of these TB AVN's is a complete publication in itself, but, you'll have to keep a file of them, because they'll frequently contain references to past issues. However, from time to time the back issues will be rescinded and those projects still open will be summarized in one listing. Then you can clean up your files.



AFTO TO TM 1—

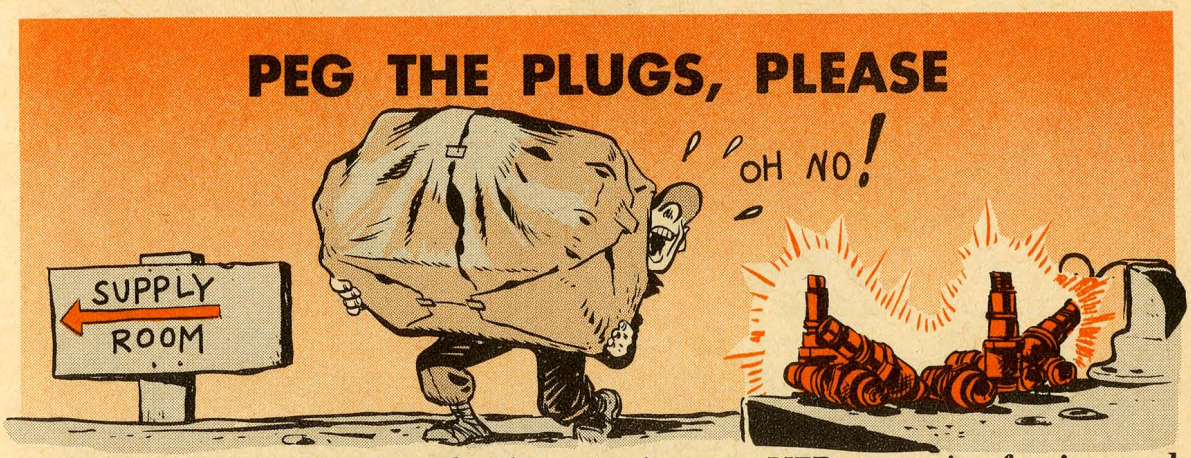


Another cause of confusion seems to be those AFTO's which have been "converted" to Army TM1's. The problem is, what to do if Air Force modifies or changes their TO after the Army has made a TM1 out of it.

Basically, you don't worry about it. In general, the changes to AFTO's may or may not apply to Army use, so you wait for the word.

But, just to make things simple—comply with AFTO's, including their supplements and revisions or DA TM's including their revisions and changes, whichever has the later date for the -1, -2, -3, -4, -5, -6, and -10 handbooks only.

When things get squared away, those revisions to the TO's and TM1's will be brought out simultaneously as needed, then there'll be no doubt in anybody's mind.



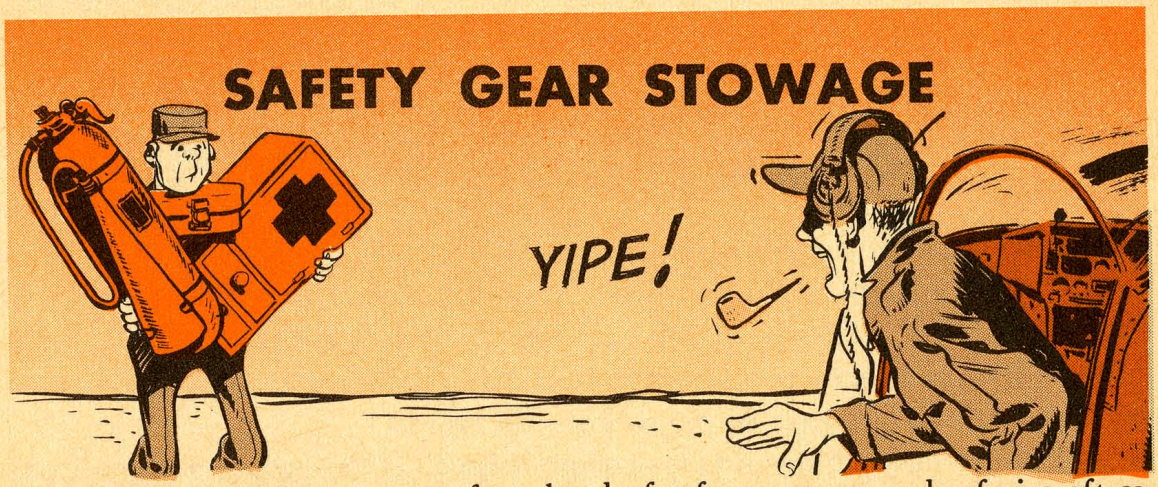
Please to remember, friends, that any time you UER an engine **for internal failure—the spark plugs must be shipped with the engine.**

And they should be marked or tagged, to show what port they came from. Like "Number one cylinder, front", if the plug came from that port on a radial engine, or "Number one cylinder, top" if it came from there on a horizontally opposed engine.

This is real important because there may be a clue in the spark plug that'll help the engineers tell what caused the engine to fail.

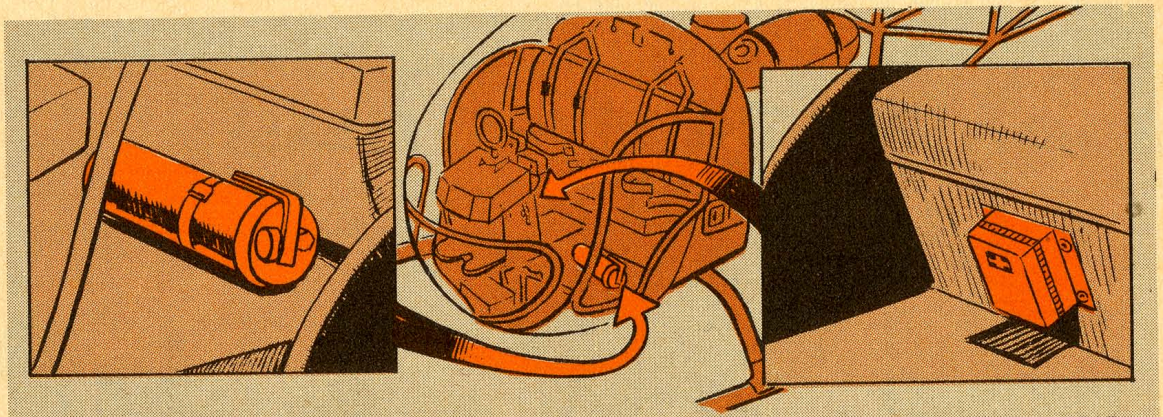
Same thing applies, of course, to the rest of the A-1 accessories. Be sure they go back with the engine, in case one of 'em is the cause of the trouble. Don't try to judge this yourself—you might be right, but you might overlook something. Send the right junk back with the engine, and your engines will get safer all the time.

SB 1-15-5 answers any questions you may have—especially about what to do with one-time-use plugs.



TM 1-1H-13-529 puts your safety ahead of a few extra pounds of aircraft capacity, as it should. It tells you to mount fire extinguishers and first aid kits in your Sioux (H-13) choppers.

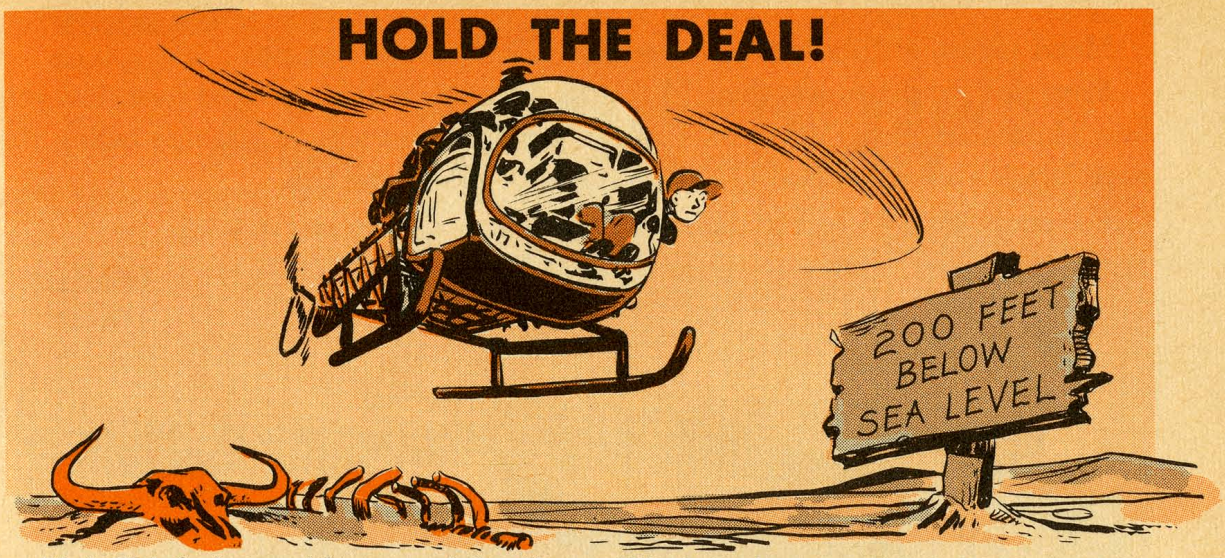
Field maintenance will help you if you need 'em.



The fire extinguishers, 4506-13X13261 or 4586-A20-0-51, Part Number 13X113261 or A-20-0-51, respectively (FSN 4210-399-5991 or FSN 4210-595-0889), are Engineer items.

The first aid kits, JAN 9-196-650 (FSN 6545-919-6650) Part Number AD-201, are Medical Corps issue.

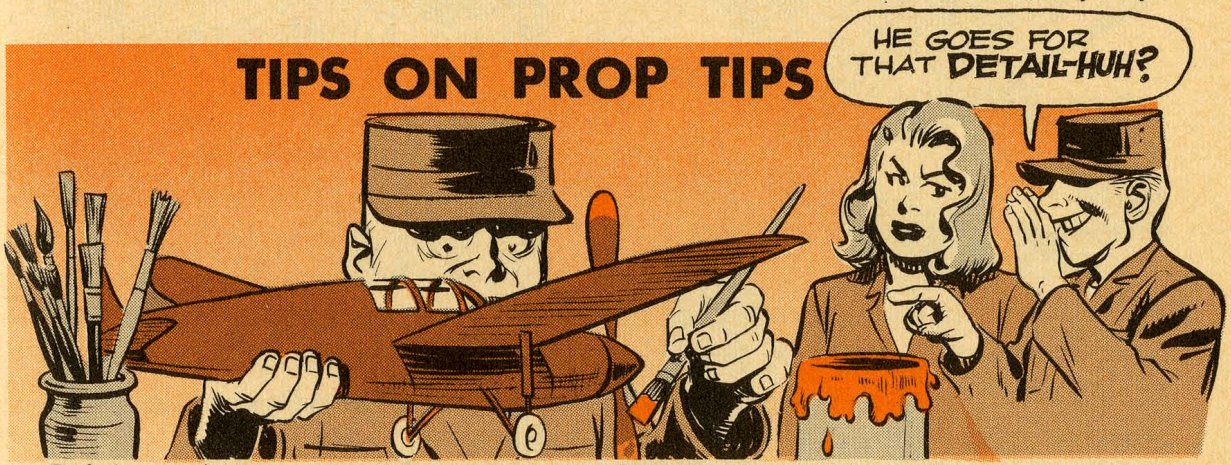
Bein's your Sioux has a critical center of gravity, and you're adding 8½ pounds, be sure you check out para 6 of the TM carefully for weight and balance, and enter the added equipment on your 780, in accord with AR 700-1500-2.



Ho! Chieftains and braves of the Sioux (H-13 maintenance men).

That TO 1H-13-537, 8 July 57 (TM 1-1H-13-537, 27 Dec 57) which told you to inspect and replace (if unmodified) the altimeter on your whirlybird was canceled because the new altimeters were not available, and didn't apply to Army aircraft anyhow.

A TWX (AOO-10-00411, 4 Oct 57) should have reached you if you had a Sioux (H-13) helicopter. But in case it didn't, or if the TM 1 got stalled somewhere along the line and hasn't reached you yet, be sure you remember to forget it. Treat it as you would any other canceled TM 1. Also remember that the TM 1 was once an AFTO, and you should never never check static line leaks with the instrument connected. The Sioux (H-13's) don't have static lines to the altimeters, anyway.



Bein's as Army propellers are now being overhauled by private contractors instead of by Air Force depots, the contractors have been given Army specifications for painting 'em. These are not the same as AFTO 3-1-503 laid down, so the props you'll be seeing soon may look a little strange to you.

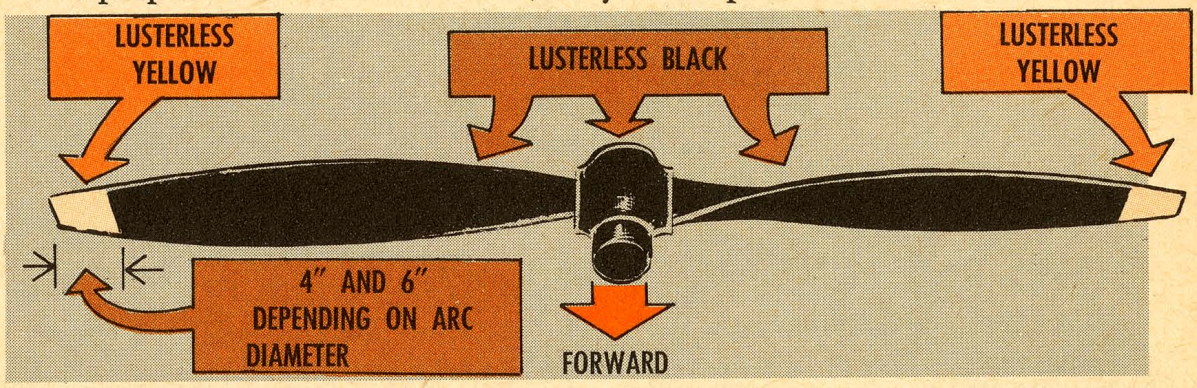
So here's the latest, and be sure your props comply with it.

Wooden props, if any are still around, natural color of the wood after two coats of varnish, (MIL-V-6893) except the tips.

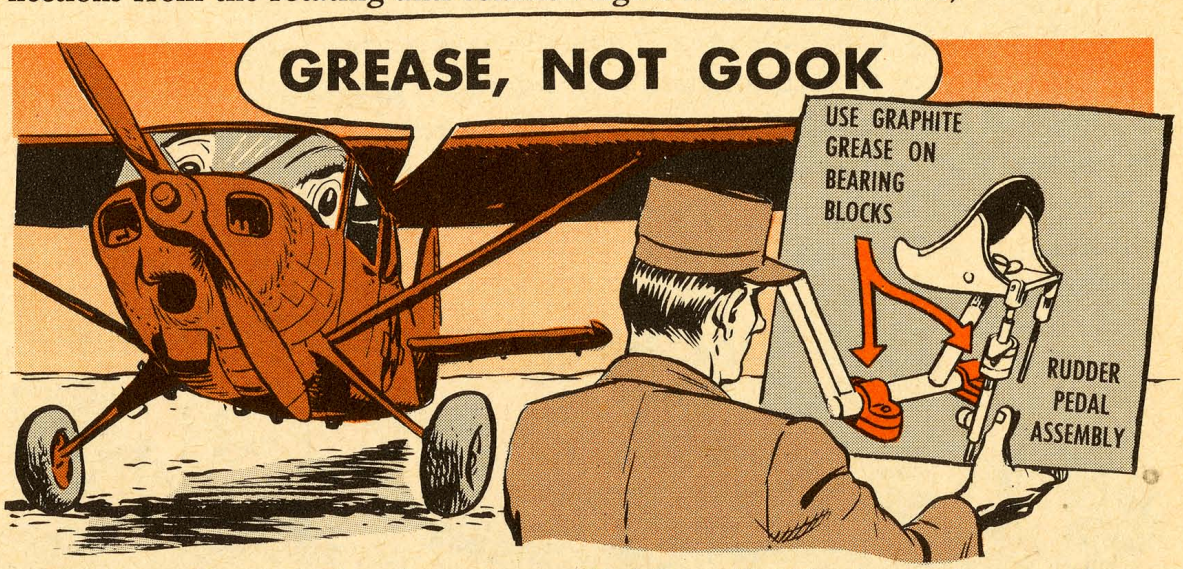
Metal props, all black (lusterless No. 3725), except the tips.

Prop tips for props less than 15 feet in diameter will be painted lusterless yellow (lusterless No. 3305) for 4 inches on the **front** side of the tips facing the nose, black (lusterless No. 3725) on the back side of the tips.

For props over 15 feet in diameter, the yellow tip is 6 inches wide.



And once again, the lusterless yellow on the aft side of all propellers for fixed wing aircraft will be removed and replaced with lusterless black. (No more reflections from the rotating anti-collision lights to blind the crews.)



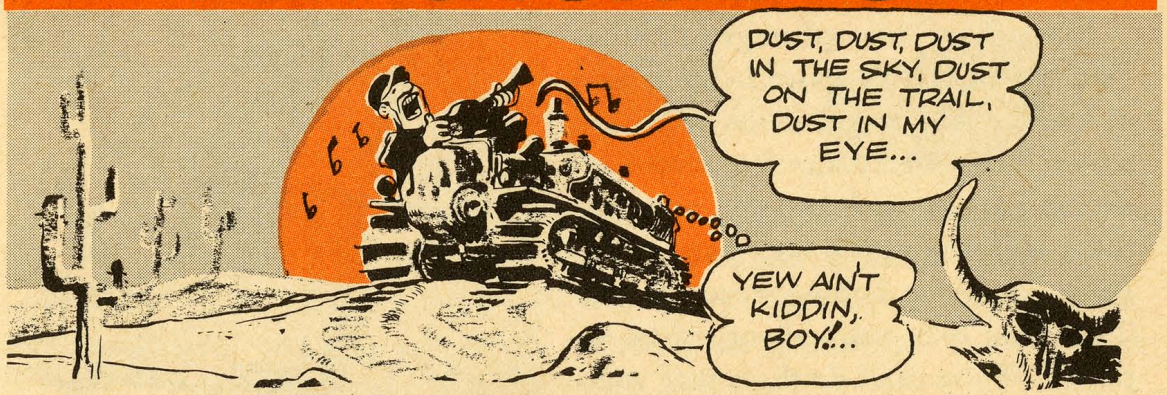
On the rudder pedal bearings of your Bird Dog (L-19), that is. It seems that a blooper slipped by in the 31 Jan 55 revision of the TM 1-1L-19A-2 lube chart. It called for the use of general purpose oil in these bearings, instead of the graphite grease called for in the original dash 2.

This isn't good, because the oil washes out any graphite grease that was in the bearing, and then collects dust and dirt to make a fine abrasive. So the bearings (FSN 1560-692-2450, outboard and inboard front cockpit and outboard rear, and FSN 1560-692-2451, inboard rear) wear out before their time.

So, on your next lubrication, please to take these bearings apart, clean 'em up, and lubricate 'em with graphite grease when you put 'em back. Gives longer bearing life.

Service air cleaning systems so your
Diesel engines won't get—

ALL CHOKED UP



You can't be too careful during that final checkup for standby inspection. And you can't be too careful when it comes to making sure your diesel engines are getting clean air.

Dirty, dust-loaded air going into a diesel engine is something like putting a guy in the middle of a desert during a sandstorm. Don't give him a mask or some other protection and he wouldn't last long. It takes a little longer, but unfiltered air in a diesel engine will kill the engine by wearing the parts. The amount of wear and how fast it is depends on how much dirt gets in the engine. So a good checkout of the air-cleaning system on your diesel rig will really pay off.

The first thing that comes to mind when you think of dirty air is a busted or dirty air cleaner. But more dirt gets in an engine through a break or crack in the air duct system than through a bad air cleaner.

AIR DUCTS

So start your check by making sure the ducts in your air system are air-tight. To test it, you'll need a soap suds solution, and an air supply that can be kept at not over 2-PSI. Just about any air hose with a shutoff valve will do the trick.

Test the air system this way:

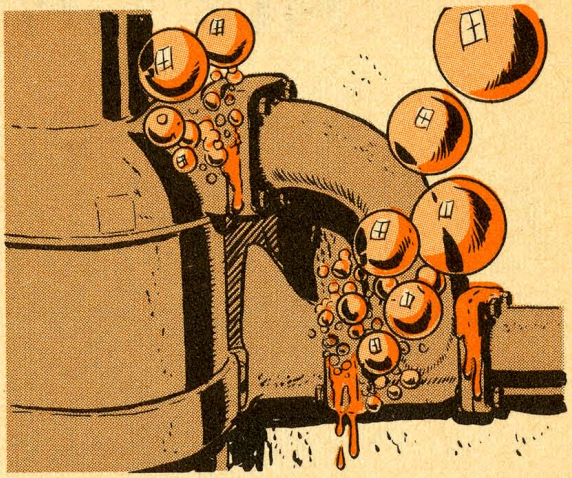
Take off the air inlet hood (pre-screener) and put the air hose in the pipe. You can stuff a cloth around the air hose to hold it in. When you put that air hose in the pipe, **make sure it's not air-tight.** If the connection is air-tight, enough pressure could build up to blow the air ducts.

Plug the exhaust outlet and make sure all exhaust manifold gaskets are tight.

Put air in the system, but don't let it build up to more than 2-PSI. Two pounds per square inch isn't much. So, if you don't have a gage to measure the air you're

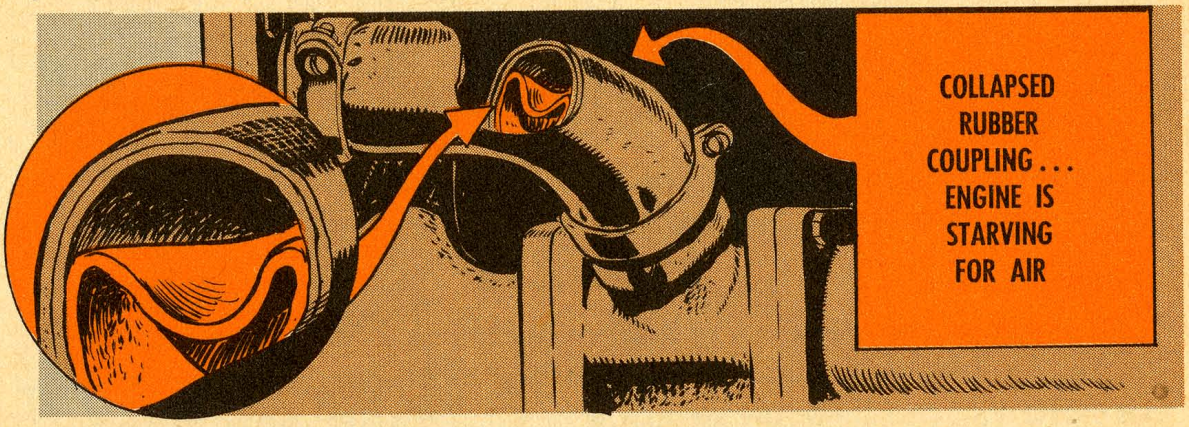
putting in, take it easy. Let air in slow and make sure air is escaping around the cloth that's holding the air hose in.

Brush the soap suds solution over all the air ducts. Be sure the connections have a good coating.



If you have any openings in the air duct system, the air sealed in the system should be blowing bubbles with the soap solution. Make sure your soap solution is put on thick enough, and give those air ducts a good once-over. Every place you get a bubble means the air ducts need to be patched—or maybe replaced. If you can't do the repair yourself, tell your support unit.

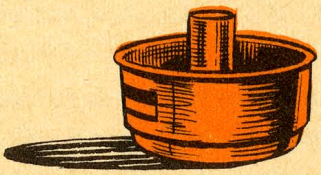
If your rig has the air cleaner duct hooked to the intake manifold with a rubber coupling, there's an extra step. Take the rubber coupling off and inspect the inside for cracks or peeling. Check to see that the coupling isn't collapsed. If it is, the air supply to the engine is cut down—or clear off. Matter of fact, any time your diesel engine is starving for air, check that rubber coupling. It's a good



bet the coupling is collapsed, or has peeled apart inside.

Now take out the plugs, put the air inlet hood back on, and you're back in business.

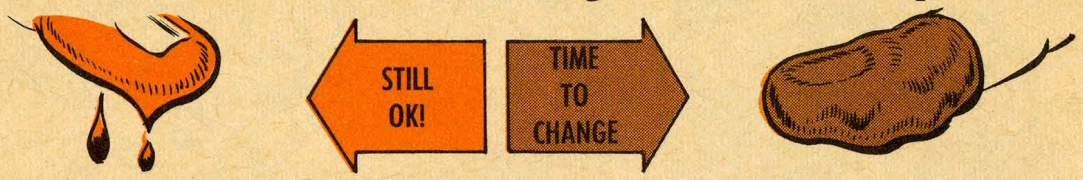
AIR CLEANERS



Service air cleaners at least as often as your publications say. A TM, TB, or LO will usually say to disassemble and clean 'em once a week. Clean them as often as your pub says even if the place your equipment is operating in is pretty much dirt and dust free.

If you're in a real dusty area, use your judgment. There are some jobs so dusty that dirty air cleaners have to be pulled off and serviced every 4 hours.

How can you tell when to change the oil in an air cleaner? A general rule is that the oil's shot when ¼ inch or more sludge collects in the oil cup.



When is the oil too thick to remove dirt? The quickest and easiest way to find out is the finger flow test. Dip a finger in the oil pan. If the oil runs off your finger, it has enough flow—meaning it's still thin enough—to do its job. If you have any doubt on the thickness of the oil, clean the pan and put in new oil. It only takes a minute, and it means a lot to your engine.

When you service your air cleaners, give 'em a laundry job like this and your engines will breathe a cleaner life.

Dismantle the cleaner. Wipe the inside of the air inlet housing with a clean cloth.

Clean the metal wool stuff inside the air cleaner by soaking it in cleaning solvent. If your air cleaner has a tray in the oil pan, soak the tray in solvent and brush off the tray screen.

Push a clean rag that won't shed lint through the center tube of the cleaner a couple times.

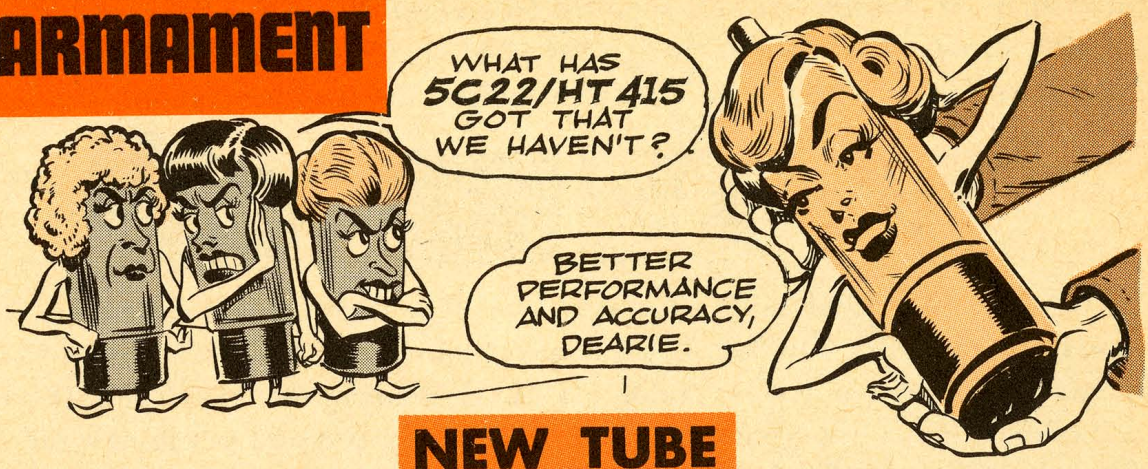
Throw away the old oil and sludge in the pan, and wipe the pan clean.

Refill the oil pan with the same type and grade of oil that's in the engine crankcase. Don't dilute the oil in the cleaner, and don't fill the pan with a solvent like kerosene.

Check the seals over when reassembling the cleaner. They keep oil in the cleaner during hillside operation, and stop air from getting in the cleaner at the wrong places.

Don't put off checking and cleaning your diesel engine air cleaners and running a test on the ducts. Service takes just a little time and work, but it means your engine will breathe a lot easier—and live longer.

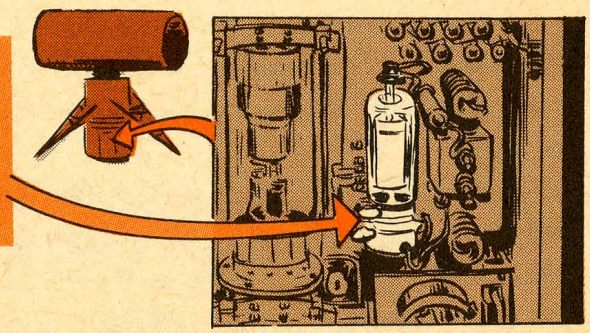
ARMAMENT



NEW TUBE

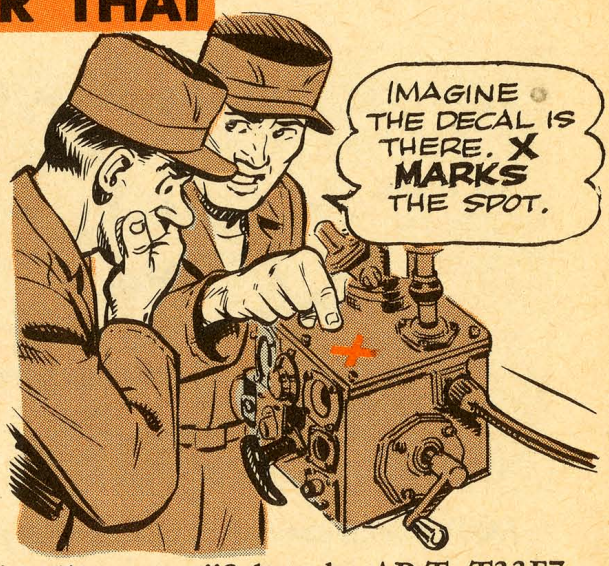
Step right up to a requisition form and order yourself a replacement electron tube for the modulators in the Nike-Ajax and M33 FCS acquisition and tracking systems.

The new 5C22/HT 415 tube, FSN 5960-548-9851, goes into the socket where the 5C22 is now sitting. And you make the switch soon's you get the new tube.



The big deal is that the 5C22/HT 415 tube gives you better gas pressure control, which means there's less chance of frequency drift. And that means better performance and accuracy.

THIS FOR THAT



OK... so you're an M48-series tanker. And you know that AP-T, T33E7 90-mm ammo now goes by the handle AP-T, M318A1.

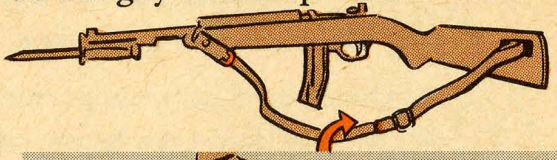
Trouble is, you say, the ammo indicator tab and its super-elevation cam in the M13 and M13A1 ballistics computer still refer to AP-T, T33E7.

What do you do while waiting for computer to be brought up to date? Your best bet is to keep telling yourself you have a decal on the computer which tells you to "Select the AP-T, T33E7 ammo indicator tab when firing AP-T, M318A1 ammo."

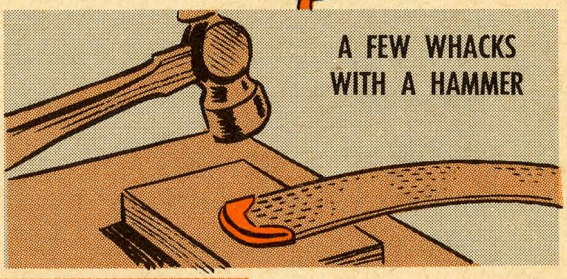
FLATTEN THAT TIP

Didja' ever see a guy fight the sling as he tried to get it through the slot of his M2 carbine?

The metal end clip on the sling won't fit so he tries to push it through with a screwdriver, punch or nail. Maybe it goes through. Then maybe the sling gets beat up or the stock is gouged. Could be the guy winds up with a hole in his fingers or hand.



There's a way that's a whole lot easier. Get your armorer-artificer to put the end clip on something that's hard and flat—like a piece of steel—and then give it a few whacks with a hammer. That's all it takes to flatten the end clip enough to get it through the slot in the stock.



SETTER POINTER

Just because your supply manual doesn't mention the M27 fuze setter . . . that's no reason you shouldn't have it. You need it for time fire missions with the M30 4.2-in mortar . . . right?

The first thing you have to know is that the fuze setter is listed under FSN 1290-764-7761.

Then in Block 6 of your DA Form 1546 write "Not in Supply Manual. See Remarks."

And under Remarks in Block 36 tell supply you need the fuze setter to use with the M30 4.2-in mortar.

1. TO: 81st INF — 34th ORD CO

END ITEM IDENT ▶ | 3. END ITEM NAME AND MANUFAC: MORTAR, 4.2 IN | MODEL | NO. 1846 | 6. PUBLICATION - YEAR - PAGE NUMBER: NOT IN SUPPLY MANUAL SEE REMARKS

7. STOCK NUMBER: FSN 1290-764-7761 | 8. ITEM DESCRIPTION: FUZE SETTER, M27 | 9. U/M | 10. DEST.

11. ORGANIZATION CODE | 12. REQUEST NUMBER: 26-58 | 13. DE... INITIAL: R.H.H. | ...NSPOR-N CODE | 17. TRANSACTION CODE | 18. DATE OF REQUEST: 9 Oct 58

19. SOURCE OF SUPPLY | 20. PIA CATEGORY | 21. FUNDS CITED | 22. STOCK NUMBER CHANGE | 23. SUBSTITUTE ITEM STOCK NUMBER

24. DA... | 28. POSTED TO STOCK RECORD (Initials & Date) | 29. UNIT PRICE | 30. TOTAL PRICE

31. FIG... POSTED (Initials & Date) | 33. COMMAND MANAGEMENT DATA: ☐ FUNDED ☐ NON FUNDED ☐ CONSUMABLE ☐ NONCONSUMABLE

34. CO... ION | 36. REMARKS: NEED FUZE SETTER TO USE WITH M30 4.2 IN MORTAR

QUANTITIES AS INDICATED HAVE BEEN		QUANTITIES AS INDICATED HAVE BEEN		APPROVED	
RECEIVED / ISSUED	STOREKEEPER (Initials & Date)	RECEIVED / TURNED IN	AUTHORIZED REPRESENTATIVE (Initials & Date)	DATE: 9 Oct 58	SIGNATURE: Lt. R. H. Hay

DA FORM 1 APR 57 1546 (7 Parts) REPLACES EDITION OF 1 AUG 55 — REQUEST FOR ISSUE OR TURN-IN — SHIPPING COPY 1

KEEPING THAT
AIRBORNE EQUIPMENT

DOWN—BUT NOT

OK—you're down—and safe!

So is your heavy cargo—the Jeeps, the ¾-tons, the 105's and all the rest.

Once you check your personal gear and recover your chute, it's time to de-rig the heavy equipment and start rolling.

And a few seconds of good de-rigging now will make a big difference later on how fast your outfit gets its gear on the line for another drop.

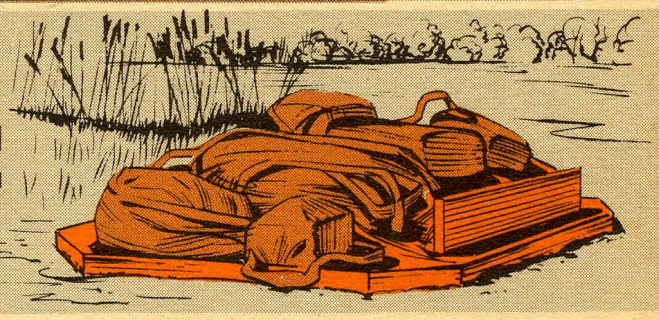
Cargo chutes are costly and hard to come by—and your next drop usually depends on those same chutes. So lend a hand to keep them ready.

By sticking to a few, simple de-rigging rules, you'll help the gents who repair and repack the chutes and speed up your whole outfit's operation.

These are a few de-rigging tips that'll keep your heavy-drop gear in fighting shape for next time.

Always bear in mind, of course, that those big chutes and heavy-drop equipment are usually hustled off the DZ on a priority basis.

You'll need them again . . . so lend a hand.



Stow all canvas, hardware, webbing and straps **on the platform.** Takes only a second.

KEEPING THAT AIRBORNE EQUIPMENT

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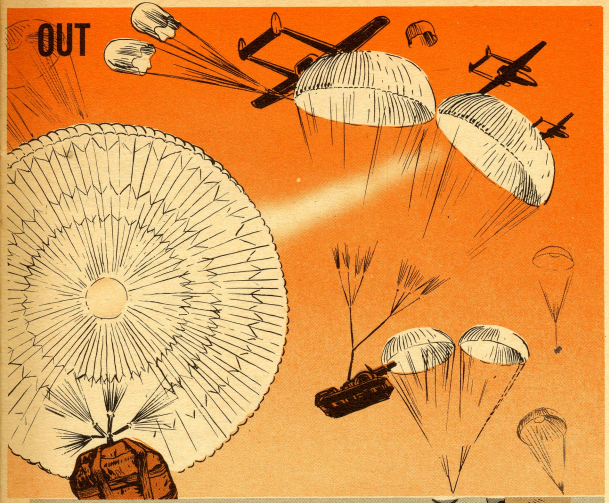
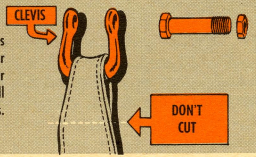
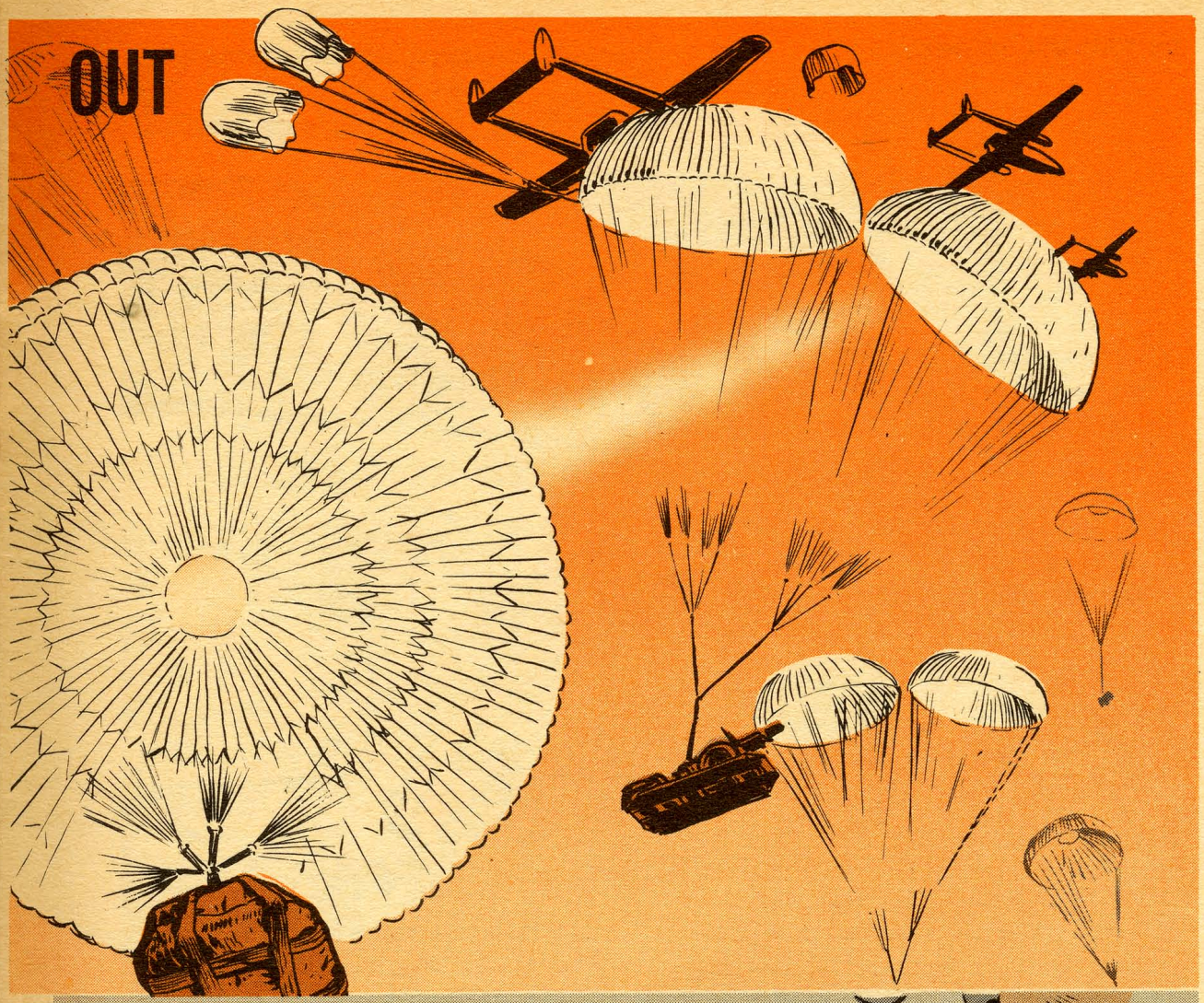


Try to keep your feet **off the canopy.** It's made out of nylon and takes a bad beating 'neath a jumper's boots.

Stow all canvas, hardware, webbing and straps **on the platform.** Takes only a second.



Never cut the nylon suspension slings unless the enemy is chargin' across the drop zone or some other emergency is breathin' down your neck. A few quick twists with the fingers will loosen the nuts and bolts from the clevises.



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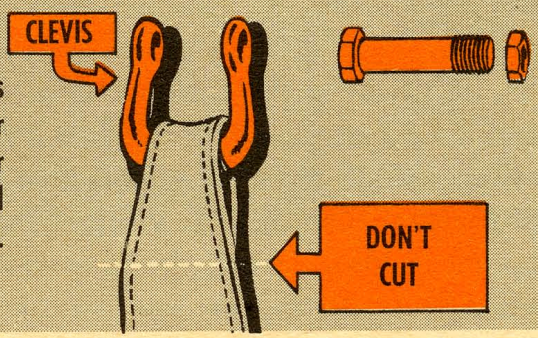
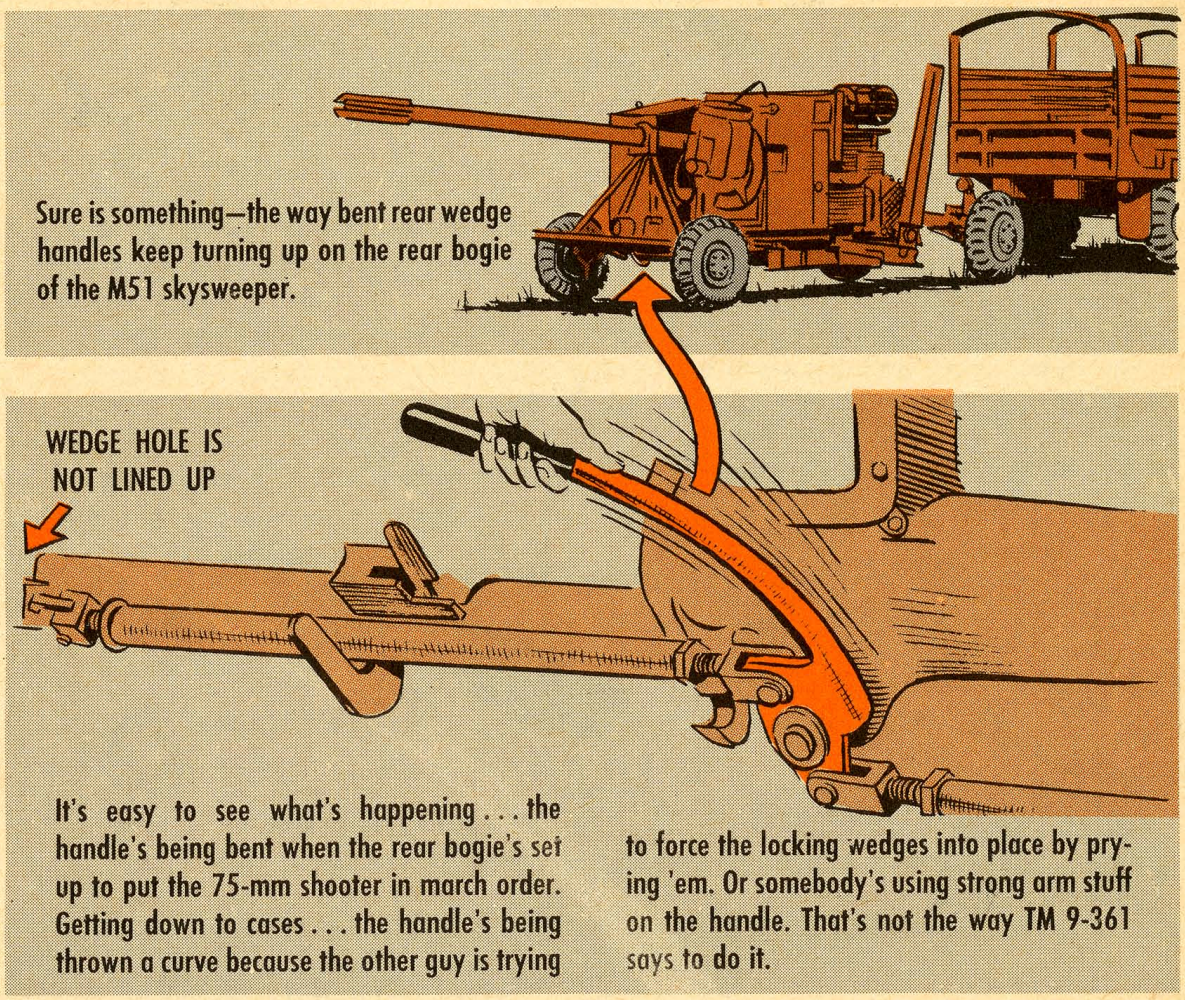


GIVE A BREAK, NOT A BEND



As the TM puts it, the wedges will slide into place if the wedge holes on the rear suspension are lined up with the wedge holes on the pedestal attachment plates. Then there's no reason to put all you've got on the handle to get the wedges into the holes.

You know what happens when you have a bent handle . . . the locking wedges aren't locked right. After you do some moving down the pike, the wedges vibrate out of place. The bogie breaks free and the weapon drops to the ground like 10 tons of metal. Chalk up one battered weapon and maybe some of the crew.

So play it shrewd. Get friendly with TM 9-361. And before you put the 'Sweeper in march order, double check everything that's tied in to the hooking up of the bogie to the pedestal—like the rear wedge handle, latch handle detent, plunger spring and plunger. Make sure they're in good shape and are doing their job.

And if the crew across the way has a bent handle, tell 'em to give the word to your support unit.

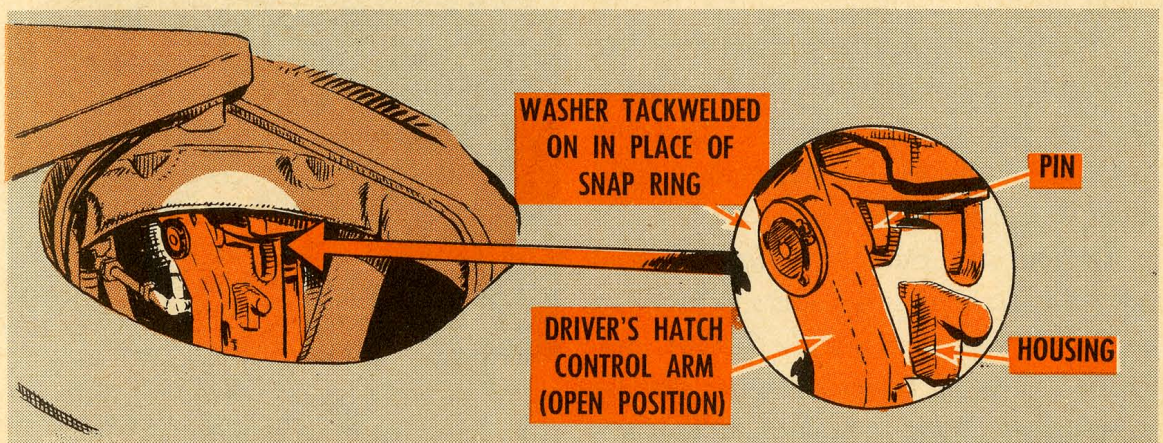
CONTRIBUTIONS

PIN-UP

Dear Editor,

Our M48-series tank drivers were running around in circles over snap rings until we came up with this simple field fix.

The ring I'm talkin' about is the one that holds the driver's hatch control arm onto the housing pin. Because of dirt and corrosion in the control housing, there was some binding of the hatch door shaft. This made the snap ring come off when the driver's hatch door was being opened or closed.



When our Ordnance support unit couldn't get snap rings, all we did was tackweld a flat washer on the pin in place of the ring. This held the control arm onto the pin until we could get another ring.

SFC Lewis Mazza
APO 79

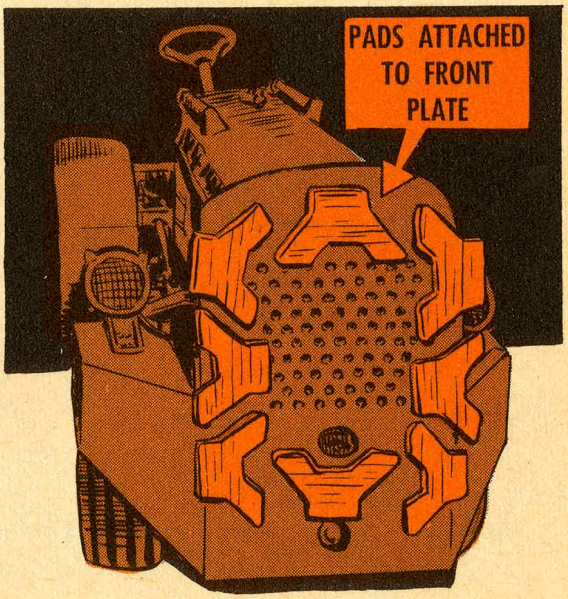
(Ed Note—The name and number of that item as given in Ord 8 SNL G254 (Nov 56) is: RING, snap, retn, exter, S, cd- or zn-pltd, 1 in. shaft dia (driver's hatch cover control handle), FSN 5340-281-3620. If that spot gets cleaned up and lubed often, like it says in LO 9-7012, you can avoid this trouble. But as long as yours is busted and your support unit can't get you the part, your idea sounds good. The washer to use is Washer, flat, steel, FSN 5310-050-2217. The ID of the washer should be tackwelded to the outer end of the pivoting pin, so it'd be easier to take the washer off—it'll also save wear and tear to the pin. Keep those tackwelds small, or you'll have a job taking the washer off when you do get the issue snap rings.)

HERE'S ONE ON PUSH PADS

Dear Editor,

Here's a photo of the push pads we've put on the front plate of our shop goat. As you can see, they are salvage track pads from the M41-series tanks. (Old tires would work, too.)

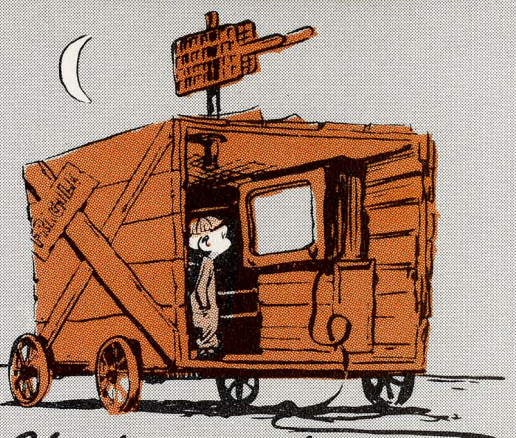
Of course, these cost us nothing, and we have found that with its soft face, we never damage or scratch a vehicle, machine, stack of boxes or what not by pushing it around. Besides, it protects the front plate, too.



Shop Crew
State Maintenance Shop
NJNG

(Ed Note—Looks good to me, and thanks for sending the photo. But remember, pushing with the top of that plate can still louse up the radiator—padded or not.)

Connie Rodd's BRIEFS



Worth reading

You have anything to do with fire control equipment? Remember, then, that TM 9-3305-2 (25 Apr 58) makes for interesting reading. The name of the TM —"Principles of Fire Control Materiel" —speaks for itself. If you want one, AR 310-1, para 41c authorizes you a copy on a need-to-know basis.

For the C. O.

Ever hear about DA Pamphlet 750-1 (Apr 58)? Its title is "PM Guide for Commanders". . . and it's available at **all** command echelons. You ought to get your copy, because it's a guide for PM trouble spots. There's a section on each tech service's equipment that points out where the first signs (indicators) of good or bad PM usually show up. Real handy.

Dipstick pipes long?

Keep an eye out for dipstick pipes (Pipe, oil level gage, FSN 2805-732-0613) for your ¾-ton trucks M37, M42, M43 and M201 that are too long.

The correct overall length should be 14⅛ inches. Some pipes that are 4⅛ inches too long got loose in the system. They'll give you a wrong oil level reading. If you run into one that's too long, tell your support unit about it. They'll either give you a pipe that's the right length, or shorten the too-long one like MWO 9-2805-204-30/1 says.

Check your shaft

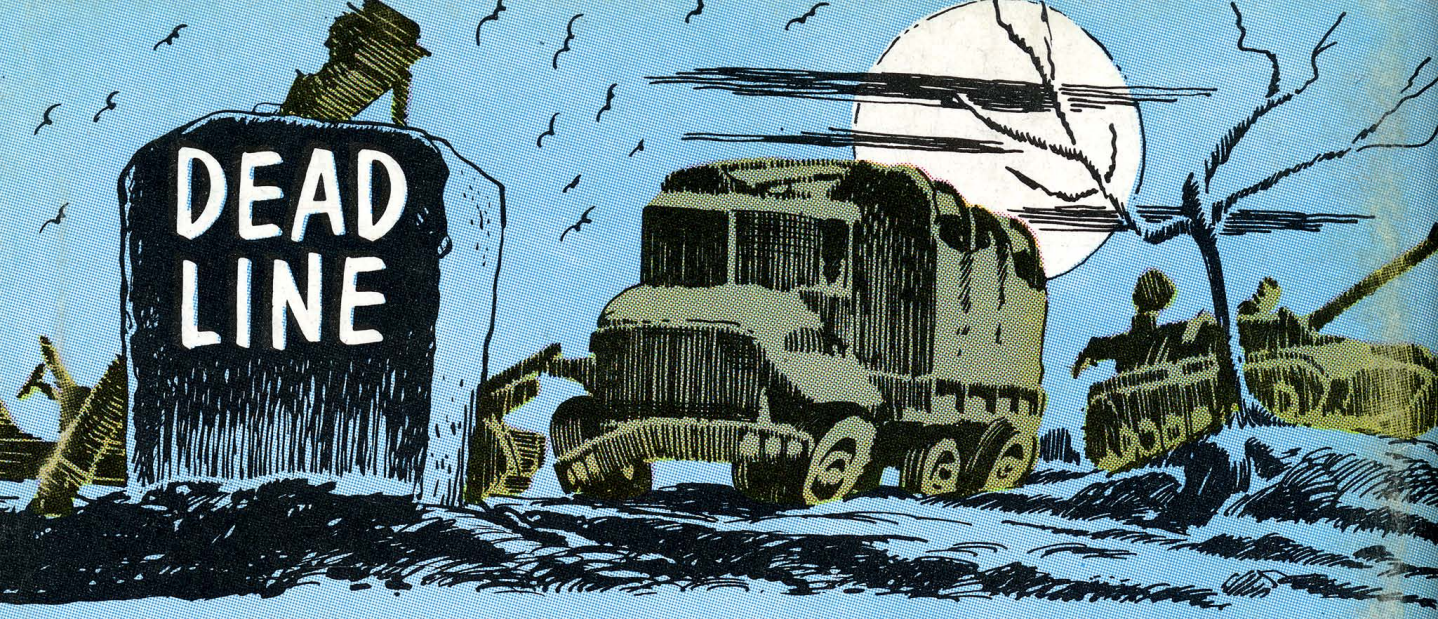
If you still have one of the G749-series 2½-ton trucks which hasn't had one of the new steering pitman arm shafts put on like MWO Ord G749-W27 (7 Oct 57) says, don't sit around doing nothing. The MWO is urgent, but until your support unit gets to your baby, check the pitman arm shafts daily, like it says in TB 9-819A-17.

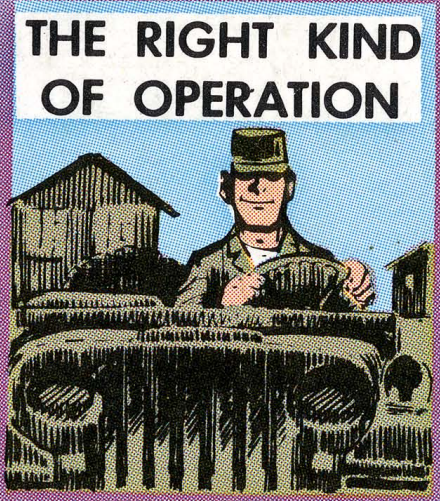
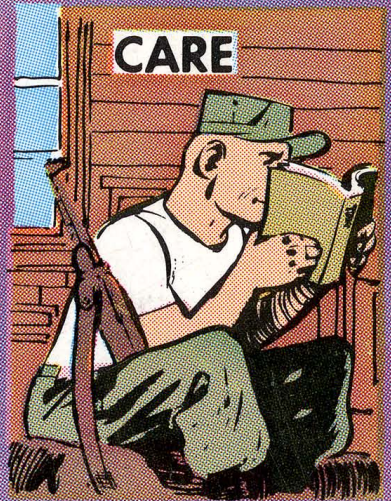
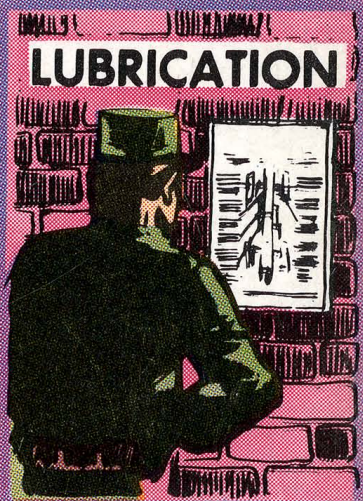
Stencil correction

Two inches can make a whale of a lot of difference . . . especially when it comes to stenciling. That's why you'd better grab your copy of PS 67 and make a few changes on page 45. The Federal Stock Numbers for the 2-in and 4-in numerals got switched by mistake. The correct stock numbers for the 2-in high stencils for numbers 0 through 9 are in the 4-in column and vice versa. The FSN's for the letters are correct.

The right numbers

FSN 5305-273-5401 is the number to remember if you want a 13/32-in cross-recess tunnel-attaching screw for your Nike-Ajax missile solid-type stud. If the 13/32-in screw bottoms, try the shorter, 11/32-in screw. It comes to you under FSN 1420-342-4622. The depots have the word to send out the longer screw once they get word from your support unit.



BEGINS WITH: YOU

KILL DEADLINE WITH...